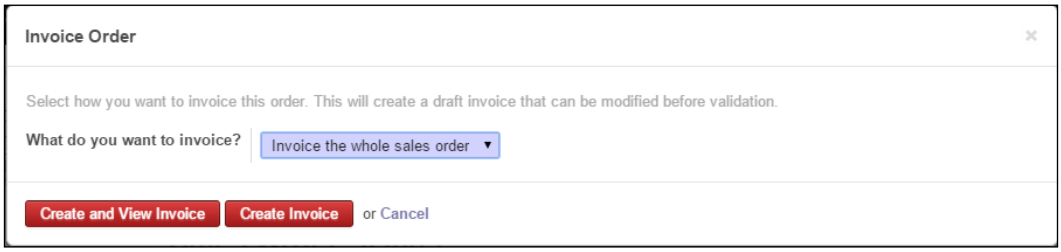
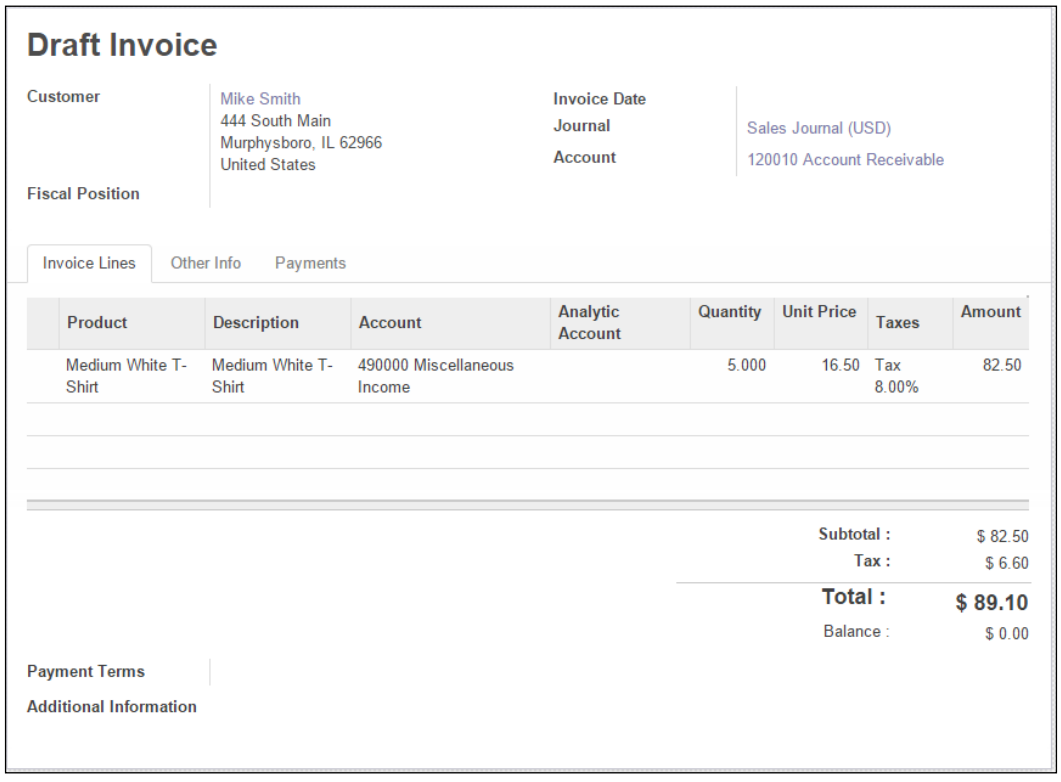
At this point, if you were to go and look at the chart of accounts, you will not see any changes to the transactions. Why is this? The way Odoo is currently configured we must manually create an invoice. Only when we click on the **Create Invoice** button at the top of the screen will Odoo actually create accounting transactions.

Click on **Create Invoice** to generate a draft invoice for this sales order:



Click on **Create and View Invoice**:



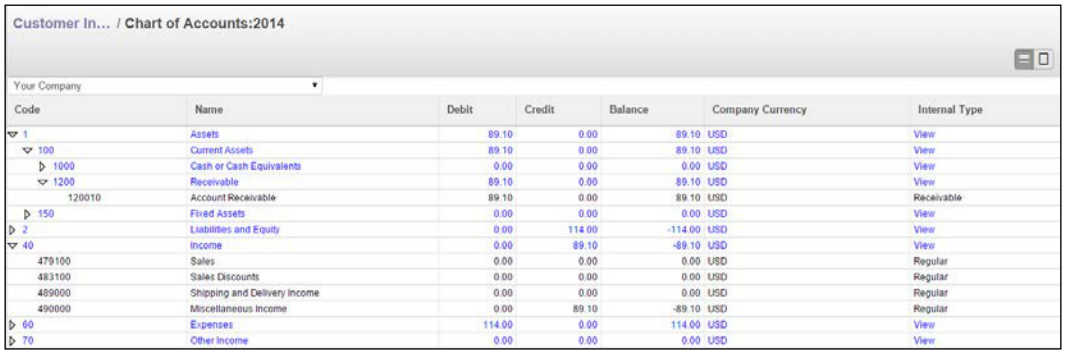
Because this is just a **Draft Invoice**, if you look at the chart of accounts, you will see no changes. However, if you look at the draft invoice, you can see the transactions that will be created once you validate the invoice. Notice that under **Account** in the header of the document, it reads **120010 Account Receivable**; this account will be debited to journal the amount the customer owes to the company once the invoice is generated.

In the line item of the sales order, you will see the **490000 Miscellaneous** account. This will be the account that will be credited for the sale of the medium white t-shirts that the customer has purchased.

Click on **Validate** to post the invoice and create the transactions.

Viewing the transactions created by validating the invoice

Now that we have validated our invoice, Odoo has automatically created the accounting transaction to increase our Accounts Receivable assets and the accounting transaction to record the sale.



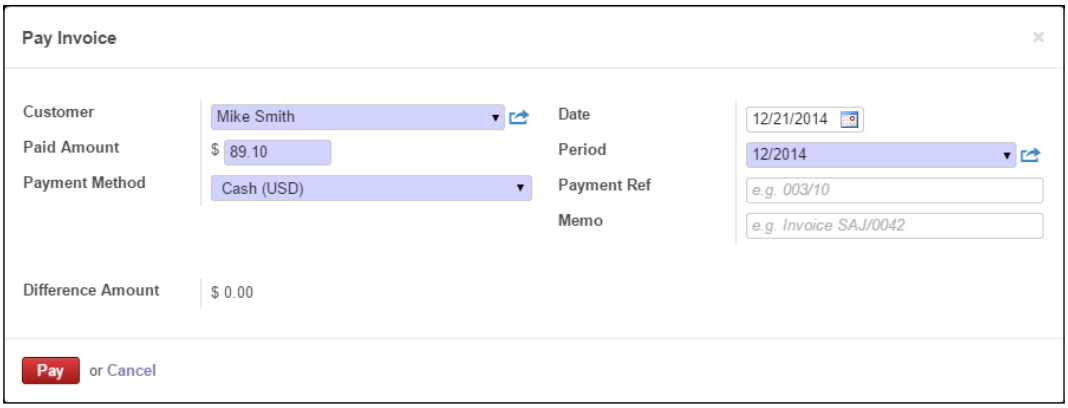
If you take a close look at the chart of accounts after posting the invoice, you will see that the **120010 Account Receivable** account has been debited by $89.10 to show the new current asset representing the customer invoice. The customer owes the company $89.10. As you create invoices and customers owe you money as a result, Accounts Receivable will continue to grow.

Next, notice the **490000 Miscellaneous Income** account has been credited with $89.10. This account will continue to be credited for the products you sell.

For our example, we are using only one sales account to keep things simple. In most companies, you will have far more sales accounts to organize the various types of products sold.

Now, let's see what happens to these accounts when a customer pays their invoice.

Go to **Accounting** and choose **Customer Invoices**, then click on the invoice to bring up the form. Click on **Receive Payment** to bring up **Pay Invoice**:



Odoo will automatically fill up the customer, paid amount, date, and period fields. For our example, we have chosen the **Cash (USD)** payment method. You have the option to provide both a payment reference and a memo to document that invoice payment.

Click on the **Pay** button to pay the invoice and create the appropriate accounting transactions.

The invoice is now paid and the journal entries have been automatically created. However, when it comes to money going in and out of the company, extra care is taken to make sure there is an opportunity to reconcile cash and bank transactions. For example, the Accounts Receivable clerk might receive a check from a customer and mark the invoice as paid. But how do we know for sure that the customer's check actually made it into the bank account?

For this reason, the journal item for the cash received to pay the invoice is created in an **Unposted** status. Let's view the journal entry:

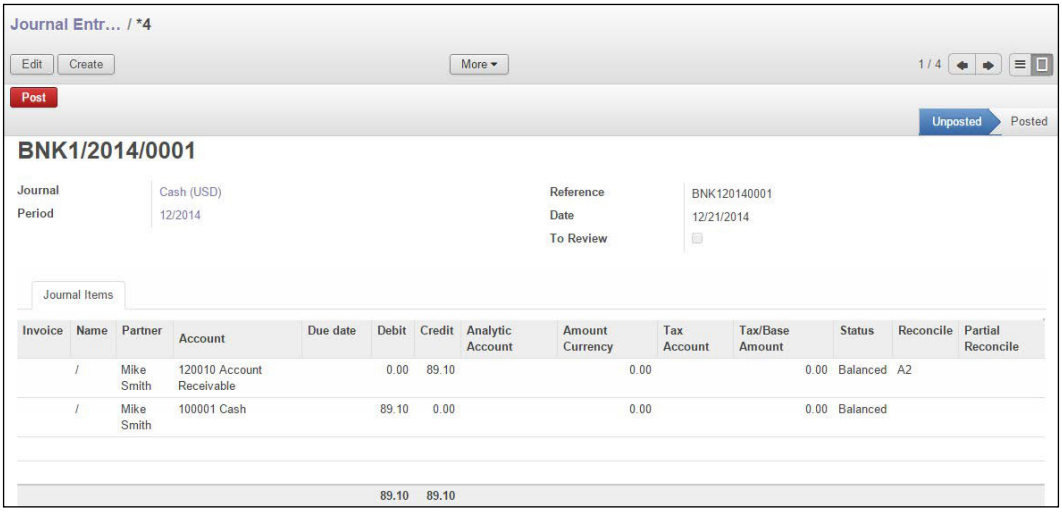
Under the **Accounting** menu, choose **Journal Entries** to bring up the list of journal entries:

In the list, you will notice we have two unposted entries. One is the entry from the payment of the purchasing invoice of $114.00, which is to be taken from the bank account. The other entry is the cash customer payment of $89.10.

In some systems, there is a dedicated step to handling daily bank deposits. With Odoo, you can implement a daily deposit workflow by leaving all deposits in a draft state and then at the end of the day, post the entries to the journal. By properly filtering unposted items, the total amount should equal the amount of your bank deposit.

Let's go ahead and post the cash entry for Mike Smith's invoice.

Click on the unposted cash payment for $89.10 to pull up the journal entry:



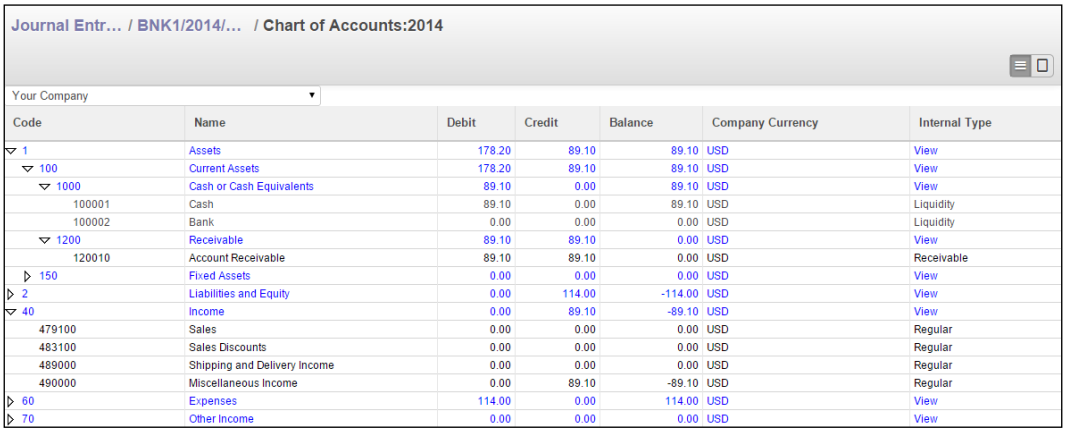
In this cash receipt, you will notice that we can see the details on exactly which accounts will be affected when we post the entry:

- **120010 Account Receivable** is credited with $89.10. This will reduce this asset account.
- **100001 Cash** is debited with $89.10. This will increase this asset account.

Essentially, this journal entry transfers the potential asset that the customer owes the company from accounts receivable into the cash account. The customer's account balance is reduced to reflect their payment.

Click on **Post** to post the entry.

Now that we have posted the entry, let's take another look at the chart of accounts to see how the Cash and Account Receivable accounts have been changed to reflect the transactions.



Code	Name	Debit	Credit	Balance	Company Currency	Internal Type
1	Assets	178.20	89.10	89.10	USD	View
100	Current Assets	178.20	89.10	89.10	USD	View
1000	Cash or Cash Equivalents	89.10	0.00	89.10	USD	View
100001	Cash	89.10	0.00	89.10	USD	Liquidity
100002	Bank	0.00	0.00	0.00	USD	Liquidity
1200	Receivable	89.10	89.10	0.00	USD	View
120010	Account Receivable	89.10	89.10	0.00	USD	Receivable
150	Fixed Assets	0.00	0.00	0.00	USD	View
2	Liabilities and Equity	0.00	114.00	-114.00	USD	View
40	Income	0.00	89.10	-89.10	USD	View
479100	Sales	0.00	0.00	0.00	USD	Regular
483100	Sales Discounts	0.00	0.00	0.00	USD	Regular
489000	Shipping and Delivery Income	0.00	0.00	0.00	USD	Regular
490000	Miscellaneous Income	0.00	89.10	-89.10	USD	Regular
60	Expenses	114.00	0.00	114.00	USD	View
70	Other Income	0.00	0.00	0.00	USD	View

First, notice that now our Account Receivable (120010) balance is zero. We can see the debit of $89.10 that was created when we invoiced the customer. Then, we can see the $89.10 credit that was posted when we received the customer payment. Now, take a look at the Cash account (100001). It has a debit and a balance of $89.10. This is the cash that we have received from the customer.

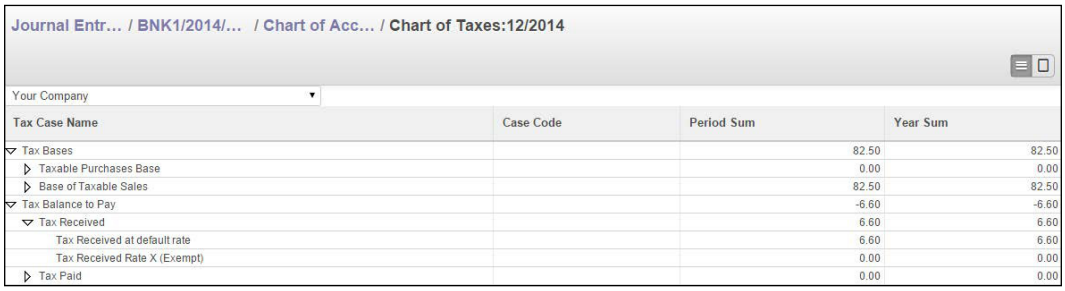
Practice posting transactions and tracking the results

Remember that people spend many years and even get full degrees in financial accounting. It is important that you take time to learn how each process you implement will affect the accounts in Odoo. When implementing an ERP system for your company, take the time to get this right. It will save you a lot of pain in the long run.

Where are my taxes?

If you have been looking at the journal entries and following along, you might have noticed that the sales taxes are not reflected in the chart of accounts. By default, Odoo posts the entire transaction to the sales account. This was likely done in order to make Odoo a little easier to implement for people that are new to accounting. You don't have to trouble yourself with setting up special tax accounts. Fortunately, Odoo provides a very easy way to see your sales tax liability.

The chart of taxes appears right under the menu item for chart of accounts:



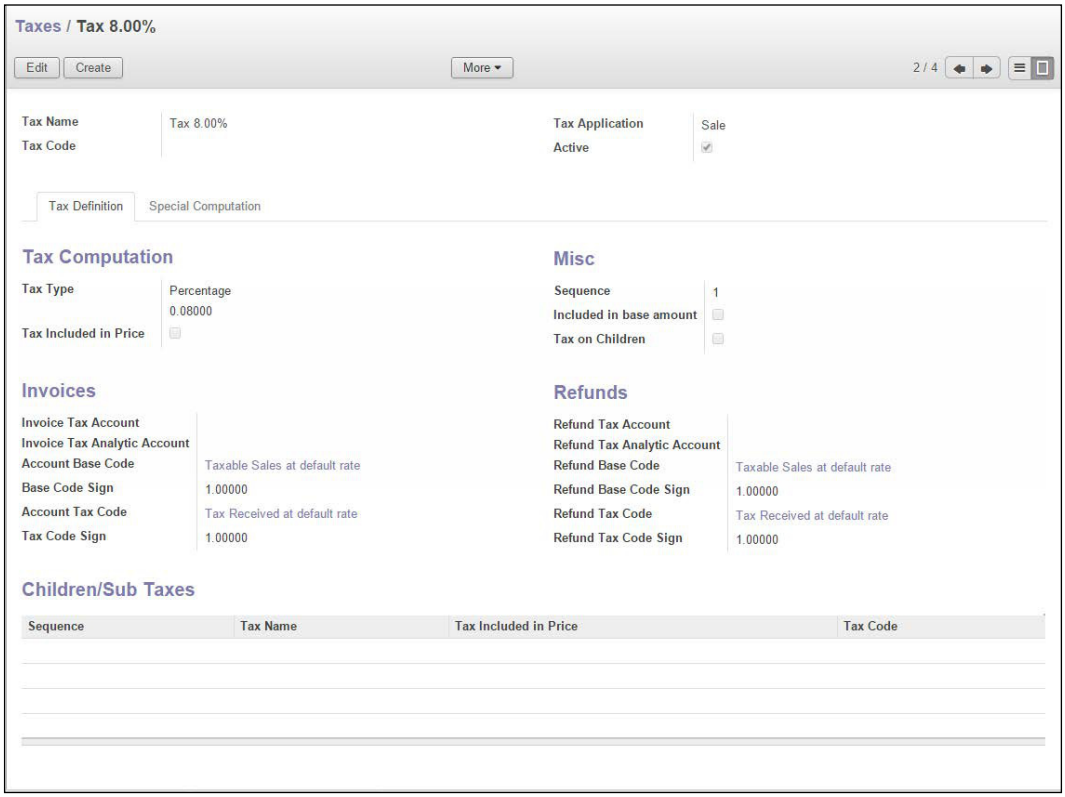
Tax Case Name	Case Code	Period Sum	Year Sum
Tax Bases		82.50	82.50
Taxable Purchases Base		0.00	0.00
Base of Taxable Sales		82.50	82.50
Tax Balance to Pay		-6.60	-6.60
Tax Received		6.60	6.60
Tax Received at default rate		6.60	6.60
Tax Received Rate X (Exempt)		0.00	0.00
Tax Paid		0.00	0.00

Here, in this tax report, you can see the **Tax Received** totaling to $6.60 from Mike Smith's t-shirt order. This setup will work for some companies but many companies are going to want to have their sales tax payable represented in their chart of accounts.

Specifying the account for your sales tax

As we have discussed, by default, Odoo does not configure sales tax to post to a specific general ledger account. To configure Odoo in order to create the appropriate journal entry in Sales Tax Payable, open up the tax entry form.

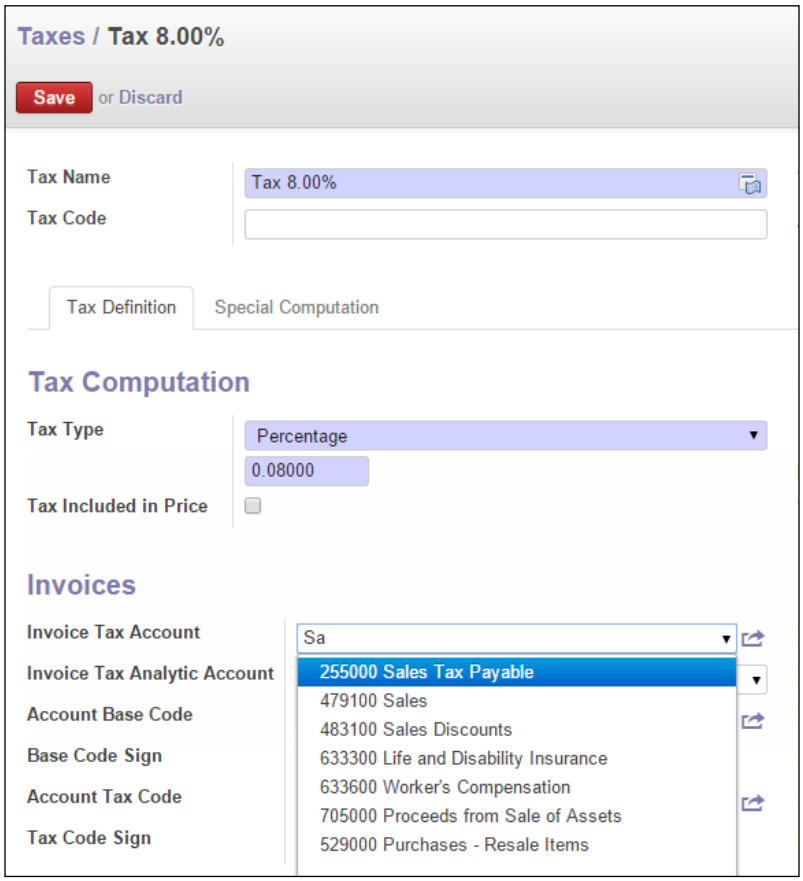
Under the **Accounting** menu, choose **Taxes** under the configuration section at the bottom of the menu. Then, click on the **Tax Type** that you would like to configure. In our example, we have opened up the 8.0 percent sales tax rate:



First off, notice that **Invoice Tax Account** is blank. By default, the taxes just go against expenses as you saw in the previous example and you use a separate report to look at your tax liability. For some operations, this makes things easier but for many businesses, you will want to setup dedicated tax accounts.

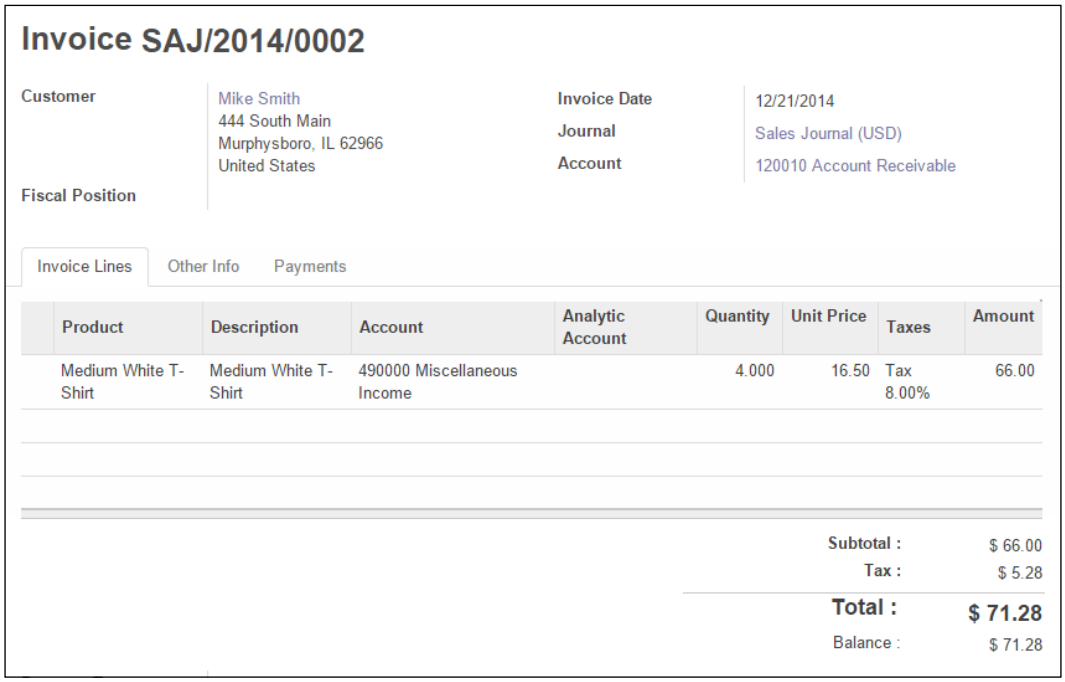
As you can see by looking at this form, there are a lot of configuration options for taxes. Fortunately, we only have to concern ourselves with a few options to configure Odoo to post to a specific account. Instead of leaving **Invoice Tax Account** blank, we will send our taxes to an alternate account.

Click on **Edit** to edit the sales tax record.



After clicking on edit, we choose to expense the 8.0 percent tax to the **255000 Sales Tax Payable** account when an invoice is posted. This account typically comes with the standard Odoo chart of accounts. With this configuration, Odoo will now credit the taxes to this account.

As an example, we created another invoice for Mike Smith that resulted in $5.28 in taxes:



Invoice SAJ/2014/0002

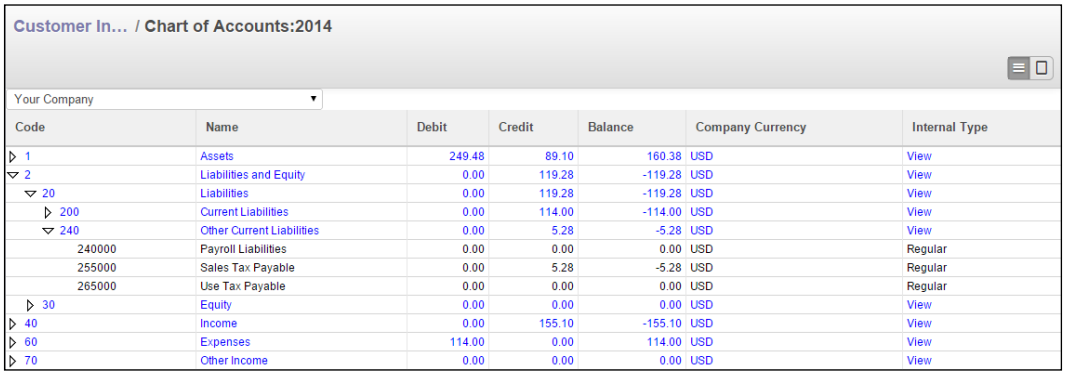
Customer	Mike Smith 444 South Main Murphysboro, IL 62966 United States	**Invoice Date**	12/21/2014
		Journal	Sales Journal (USD)
		Account	120010 Account Receivable
Fiscal Position			

Invoice Lines | Other Info | Payments

Product	Description	Account	Analytic Account	Quantity	Unit Price	Taxes	Amount
Medium White T-Shirt	Medium White T-Shirt	490000 Miscellaneous Income		4.000	16.50	Tax 8.00%	66.00

Subtotal :	$ 66.00
Tax :	$ 5.28
Total :	**$ 71.28**
Balance :	$ 71.28

We can now see this tax represented in the chart of accounts in the Sales Tax Payable account:



Customer In... / **Chart of Accounts:2014**

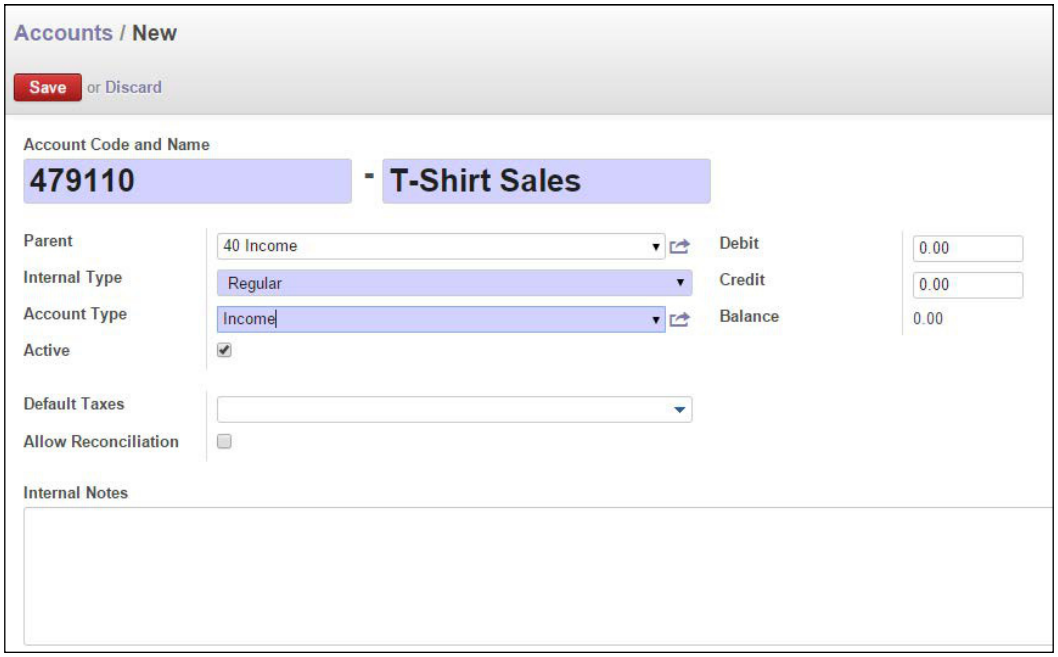
Your Company

Code	Name	Debit	Credit	Balance	Company Currency	Internal Type
1	Assets	249.48	89.10	160.38	USD	View
2	Liabilities and Equity	0.00	119.28	-119.28	USD	View
20	Liabilities	0.00	119.28	-119.28	USD	View
200	Current Liabilities	0.00	114.00	-114.00	USD	View
240	Other Current Liabilities	0.00	5.28	-5.28	USD	View
240000	Payroll Liabilities	0.00	0.00	0.00	USD	Regular
255000	Sales Tax Payable	0.00	5.28	-5.28	USD	Regular
265000	Use Tax Payable	0.00	0.00	0.00	USD	Regular
30	Equity	0.00	0.00	0.00	USD	View
40	Income	0.00	155.10	-155.10	USD	View
60	Expenses	114.00	0.00	114.00	USD	View
70	Other Income	0.00	0.00	0.00	USD	View

Setting up your own accounts

Up to this point, we have used the standard United States chart of accounts template provided by Odoo. Most companies, however, will need to modify this chart of accounts or even set up an entirely different chart of accounts to match the needs of their business. As an example, we are going to add an additional sales account specifically for t-shirts so that we can better organize our sales into types of products.

To setup a new account, go to the accounting menu and then down to the configuration section and choose **Accounts**. Odoo will present you with a listing of all your current accounts in Odoo. Click on **Create** to add a new account:



Notice in our screen that we have specified the account code as `479110`. Why did we choose this as the account code? Odoo had already provided `479100` for the general sales account. Therefore, `479110` was an appropriate account code to choose for our T-shirt sales. For the name of the account, we simply choose **T-shirt Sales**.

In addition to specifying the account code and name, we must set the account parent. Even though this is not a required field, you need to be careful and select the appropriate parent for the account. In this case, the parent account is **40 Income**. This will group the T-shirt sales with the income of other products the company sells.

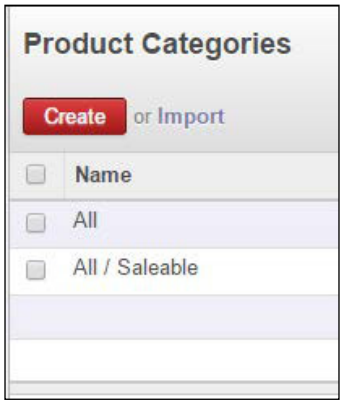
The other important setting is **Account Type**. Odoo needs to know the type of account you are setting up. So for example, if you were setting up an account that was to track the costs of products that you purchase often to produce your products, you would specify an **Expense** account type.

Take time planning your chart of accounts in Odoo. Even if your company has already been using an existing chart of accounts, it is always a good idea to evaluate the current chart of accounts and make any improvements, given the current state of the business.

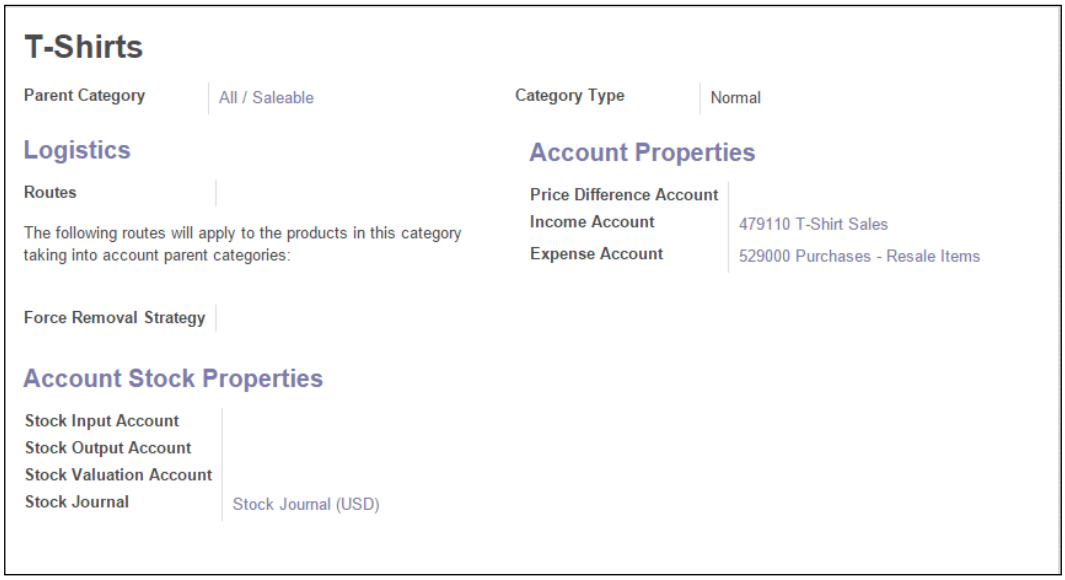
Specifying a new account for your product category

With Odoo, you can manage accounts at the product category level. Therefore, all products under a given category can utilize the same account settings. Let's create a new product category, `T-shirts`, for our medium white t-shirt and assign that category to the `479100 T-Shirt` sales account that we created. We can later add all T-shirt products under this category.

Go to the **Sales** menu, and in the **Configuration** section, choose **Product Categories** under the **Products** submenu. This lists the current product categories:



At this point, you will see that we only have two categories. Click on **Create** to create a new category for our T-shirt products:



We have named our new category `T-shirts`. All t-shirt products can now be grouped under this category. Also notice that we have set a parent category **All / Saleable**. This allows you to view the t-shirt products, along with all the other products, when you choose the parent category.

Most important from the accounting standpoint is that we have assigned the **Income Account** property, **479110 T-shirt Sales**, that we have set up in the chart of accounts. When an invoice is posted that has a line item attributed to this product category, the amount for that line item will be posted to **479110 T-Shirt Sales**. For the expense account, we have specified the built in **529000 Purchases - Resale Items**. This will change our expenses that are related to products in this category to that account.

Exercise

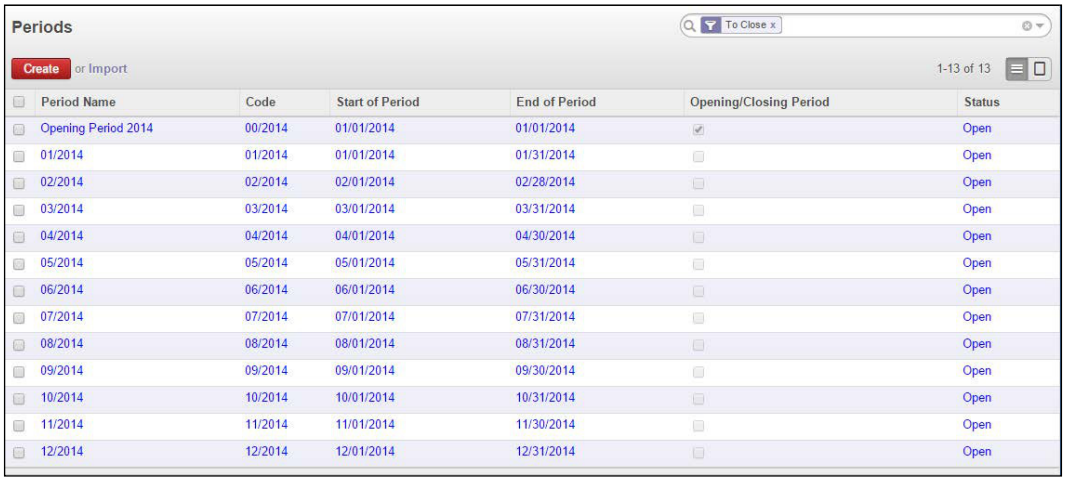
Now try going into the product record for the medium white t-shirt and set the product category to `T-shirts`. Create a sales order, turn it into an invoice, and validate it. View the chart of accounts and you will see the income against your t-shirt in the specified income account.

Remember that it is important to practice using Odoo until you are comfortable setting up accounts and clearly understand where the transactions are posted. A little bit of time and effort put in during the configuration will save you a lot of time later.

Configuring your fiscal year and periods

Companies are typically required to report financial information on a monthly, quarterly, and yearly basis. While configuring Odoo, you must specify the fiscal periods that your company uses for reporting. By default, Odoo configures your installation with an opening period for adjustments, then a period for each month in the year starting in January.

While many companies have a December 31st closing date for their year, there are quite a few companies that have fiscal years that begin and end on other dates. There are many reasons why a company might have an alternative fiscal year structure. In Odoo, we can view and edit the accounting periods by going into the configuration section of the accounting menu and choosing periods:



Period Name	Code	Start of Period	End of Period	Opening/Closing Period	Status
Opening Period 2014	00/2014	01/01/2014	01/01/2014	☑	Open
01/2014	01/2014	01/01/2014	01/31/2014	☐	Open
02/2014	02/2014	02/01/2014	02/28/2014	☐	Open
03/2014	03/2014	03/01/2014	03/31/2014	☐	Open
04/2014	04/2014	04/01/2014	04/30/2014	☐	Open
05/2014	05/2014	05/01/2014	05/31/2014	☐	Open
06/2014	06/2014	06/01/2014	06/30/2014	☐	Open
07/2014	07/2014	07/01/2014	07/31/2014	☐	Open
08/2014	08/2014	08/01/2014	08/31/2014	☐	Open
09/2014	09/2014	09/01/2014	09/30/2014	☐	Open
10/2014	10/2014	10/01/2014	10/31/2014	☐	Open
11/2014	11/2014	11/01/2014	11/30/2014	☐	Open
12/2014	12/2014	12/01/2014	12/31/2014	☐	Open

As you can see, each period is defined with starting and closing dates. In this view, you can modify the periods to meet the needs of your business. On the far right of the listing, you will notice a status column. This tells you whether the period is open or closed.

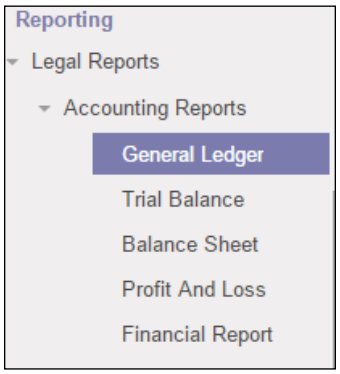
Examining the available Legal Reports in Odoo

Like nearly all accounting and finance systems, Odoo provides the standard reports you would expect including:

- General Ledger
- Trial Balance
- Balance Sheet

- Profit and Loss
- Financial Report

These reports are a bit buried near the middle of the **Accounting** menu under the **Reporting | Accounting Reports | Legal Reports**:



Each report you select will bring up an appropriate wizard that lets you specify the criteria for a given report. After you have made your selections and generated the report, you will be prompted to download the PDF file that contains the results. While going through each of these reports with all the screenshots is beyond the scope of this book, you are encouraged to spend some time examining each report, and make sure you understand how it fits within the reporting requirements of your business.

As you add more and more data to your system, some of the accounting reports will take additional time to process. As part of the testing, before you go into production, you should take the time to make sure all of your accounting reports run at acceptable levels of performance using data that will simulate real-world conditions.

Closing a period

When you have completed all the transactions for a given period, it is a good idea to close that period to prevent any additional new postings. This is important because you do not want your future transactions to accidently post to a previous period of time because of a user error. To close a period, simply click on the period you wish to close and click on the **Close Period** button in the form. You will be presented with a form to confirm that you wish to close the period.

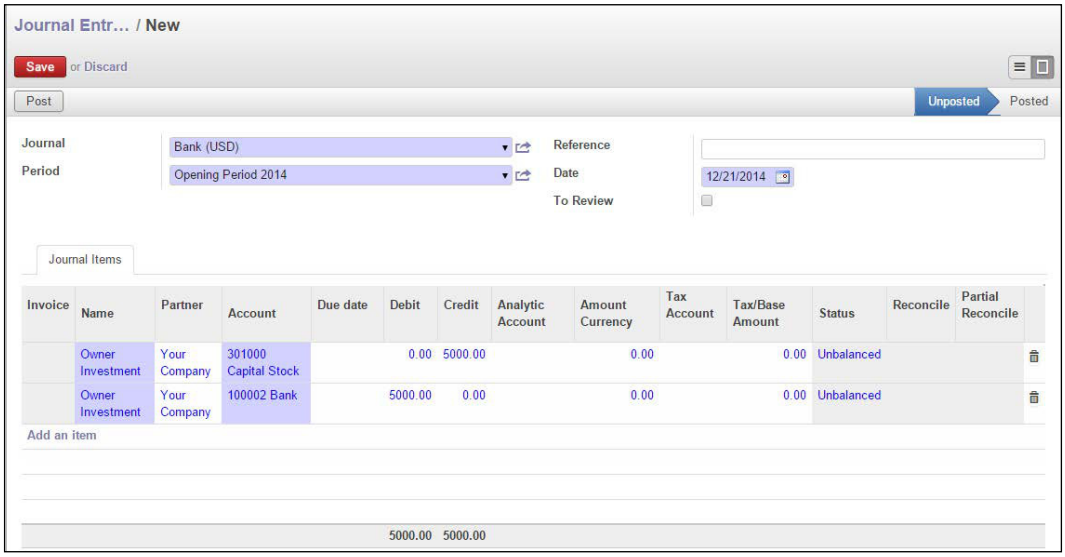
Once you have closed a period, it is possible to reopen the period if you must post a transaction to that period. Simply click on the period again and click on the **Re-open Period** button.

Creating journal entries

While Odoo will create many journal entries automatically when you perform various operations in the system, it is inevitable that, at some point, you (or your accountant) will wish to create a manual journal entry. A manual journal entry allows you to adjust account balances in a way that can easily be tracked and audited.

For our example, we are going to create a journal entry that will account for a small investment by one of the company owners. When someone puts money as an investment into a company, they are not buying anything and they are not selling anything. While there are other potential methods, a simple journal entry is a straightforward way to accurately record the transaction.

To enter a journal entry, go to the accounting menu and select **Journal Entries** in the **Journal Entries** section and click on the **Create** button:



First, when you create a new journal entry, you will need to pick which journal and period to post to. For this situation, we used an example of how to post to the bank journal in the opening period to represent the owner's investment into the company.

There is also an **Opening Entries** journal that you can also use to help you better organize opening entries for your company.

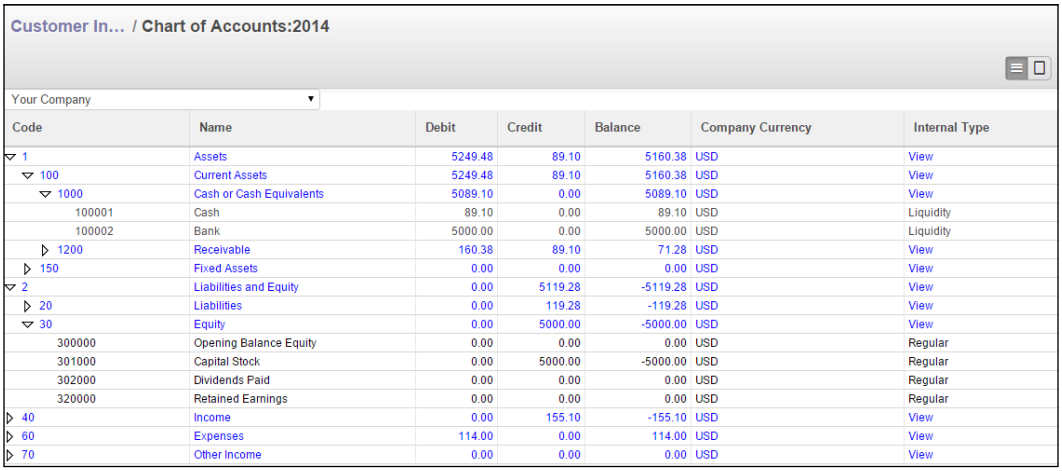
We are considering the $5000 investment as a cash investment by the owner, so we have posted this into the bank journal. Next, you can select the period you wish to post the journal entry to.

Whenever you create a journal entry, you will add at least two line items. Furthermore, the line items must balance out. In our example, we are putting $5,000 in funds from the owner into the company bank account.

Typically, any investment the owner puts into the company must also be recognized as a liability for the company. Why? The money does not really belong to the company. Instead, the $5,000, in this case, is considered the owner's equity. The owner is entitled to get that money back, and therefore it is booked as a liability. You can verify this by opening up the chart of accounts and looking at the list of main accounts. **Liabilities and Equity** are grouped together and are then divided out as you drill down into the account hierarchy.

Odoo sets up a **Capital Stock** account that allows us to post the $5,000 we have put into the bank as capital stock for the owner. Once you save your journal entry, it is in the form of a draft. To post the journal entry and have it appear in your chart of accounts you must click on the **Post** button.

After we have posted, we can look at our balances in the chart of accounts. You will notice that our assets now include the $5,000 investment, and the **Capital Stock** account in the **Liabilities and Equity** section of the chart of accounts represents the liability the company now has to the owner who invested:


Customer In... / Chart of Accounts:2014

Your Company

Code	Name	Debit	Credit	Balance	Company Currency	Internal Type
1	Assets	5249.48	89.10	5160.38	USD	View
100	Current Assets	5249.48	89.10	5160.38	USD	View
1000	Cash or Cash Equivalents	5089.10	0.00	5089.10	USD	View
100001	Cash	89.10	0.00	89.10	USD	Liquidity
100002	Bank	5000.00	0.00	5000.00	USD	Liquidity
1200	Receivable	160.38	89.10	71.28	USD	View
150	Fixed Assets	0.00	0.00	0.00	USD	View
2	Liabilities and Equity	0.00	5119.28	-5119.28	USD	View
20	Liabilities	0.00	119.28	-119.28	USD	View
30	Equity	0.00	5000.00	-5000.00	USD	View
300000	Opening Balance Equity	0.00	0.00	0.00	USD	Regular
301000	Capital Stock	0.00	5000.00	-5000.00	USD	Regular
302000	Dividends Paid	0.00	0.00	0.00	USD	Regular
320000	Retained Earnings	0.00	0.00	0.00	USD	Regular
40	Income	0.00	155.10	-155.10	USD	View
60	Expenses	114.00	0.00	114.00	USD	View
70	Other Income	0.00	0.00	0.00	USD	View

Summary

In this chapter, we examined how Odoo generates transactions and how you can use the Chart of Accounts to look at how those transactions originated. We examined both the Accounts Payable and Accounts Receivable accounts and how an invoice is posted. There are certainly more advanced Odoo topics such as bank reconciliation and recurring entries, which are beyond the scope of this book. Refer *Appendix*, *Locating Additional Odoo Resources*, to locate additional resources for more advanced Odoo subjects.

In the next chapter, we will discover how to back up and restore databases, as well as how to manage user access and group permissions.

7
Administering an Odoo Installation

With Odoo, within just a few minutes, you can have several applications installed and begin working with the system right away. In the previous chapters, we have already covered a great deal of functionality without spending a lot of time on configuration, access rules, languages, or other administrative topics.

Now we will take a closer look at important topics to consider when administering an Odoo installation. The topics we will cover in this chapter include the following:

- Basic administration of an Odoo installation
- Backing up and restoring Odoo databases
- Creating users and assigning access rights
- Internationalization, including currencies and language translation
- How to manage document sequences
- Multicompany configurations

Basic considerations for an Odoo administration

Like most IT installations, successful Odoo installations require proper planning and maintenance. Care must be taken in documenting important configuration details, and you must always have a business continuity plan in place that focuses on getting your Odoo installation back up and running within an acceptable period of time.

Having an implementation strategy

While you are learning Odoo and prototyping how you may use it for your business, you may not care much about a clear implementation strategy; however, once you have made the decision to use Odoo for your business, it is important to plan this strategy. While you may not have time to write out a 150-page detailed strategy, it is important to take the time to document your minimal plan before you begin setting up servers and installing Odoo.

The breadth of the project management and administration of an ERP system is beyond the scope of this book; however, there are several basic implementation considerations to keep in mind.

The development, staging, and production servers

One of the first considerations you will need to make when contemplating an Odoo installation is how you will configure servers for various Odoo instances that may be required during planning, deployment, and final production operations. For example, you don't want to be making modifications to Odoo's functionality in your live production system. Instead, you should always make changes and modifications in a development instance of Odoo where you can test your changes outside of the live database.

In addition to a development server and production server, it is often desirable to have an Odoo installation that users (and in some cases, business partners) can use to train and learn the operations of the system. Sometimes this installation is known as the staging server. This server will typically have all the tested changes and functionality of the live system but will be loaded with test data and configurations that are useful for training.

Each installation will have its own requirements and constraints. What is important is that you make these decisions early on in your Odoo configurations so that you can properly administer the installations all the way, from development to production.

Clear documentation of all Odoo configurations

Once you have decided what Odoo servers you require and how those installations should be configured, it is important that you create a clearly defined method to document all the details that go along with the setup. This can be as simple as a text or Microsoft Word document that is in a known place and is kept up to date. It can be as complex as using a full-blown project manager. Using cloud organization tools such as Dropbox, Evernote, and Google Documents provides you with several options on how you can document your Odoo installations.

It will be up to your own business policies to determine exactly where you store this information and how much detail you keep. One bit of advice is that it is almost always better to err on the side of having too much detail rather than too little. You will naturally need to be aware of how you secure user names and passwords and have a clear policy on how that information is securely stored.

Focusing on business continuity

Any business information system is only as good as its ability to recover from something going wrong. Despite having more reliable hardware and software, data can still get corrupted. Even the most dedicated employee can accidentally post bad data. The best security can be defeated. While everyone is trying their best, there are certainly still bugs lurking in Odoo's applications as you are reading this. No amount of planning can prevent a problem from occurring. This is why one of the most important tasks in administering an Odoo installation is making sure that you always have a clear recovery strategy.

Here are a few important tips to keep in mind:

- Regularly test your backups for recoverability. Backing up your data regularly does not mean that it is quickly recoverable. All too often, businesses may go months or even years without testing if the data they are backing up is recoverable.
- Have a strong archive of backups. Perform daily backups along with weekly and monthly snapshots. Oftentimes, data can be bad, deleted, or corrupted long before anyone knows anything has gone wrong. Someone might accidentally delete a set of old entries, and it may not be until a few months later that a manager writing a report finds critical holes in the data.
- Have contingency system options. Even if you plan on hosting locally, consider having a cloud server configured where you can run your Odoo installation in a pinch. Too often, you can have the backups ready to go, but if you are waiting on hardware to be fixed or a part to be delivered, you are going to extend your downtime. If you plan to use your development server as a backup production system, make sure you have the proper tested procedures in place. Don't make blindly optimistic assumptions about your system contingencies. Test them at least once or twice a year.
- Make sure you know how long it takes to fully recover your Odoo installation and what data would need to be re-entered into the system. If you back up nightly, and it takes you four hours to get your installation back up and running, make sure your internal business processes are clear on exactly what steps are required.

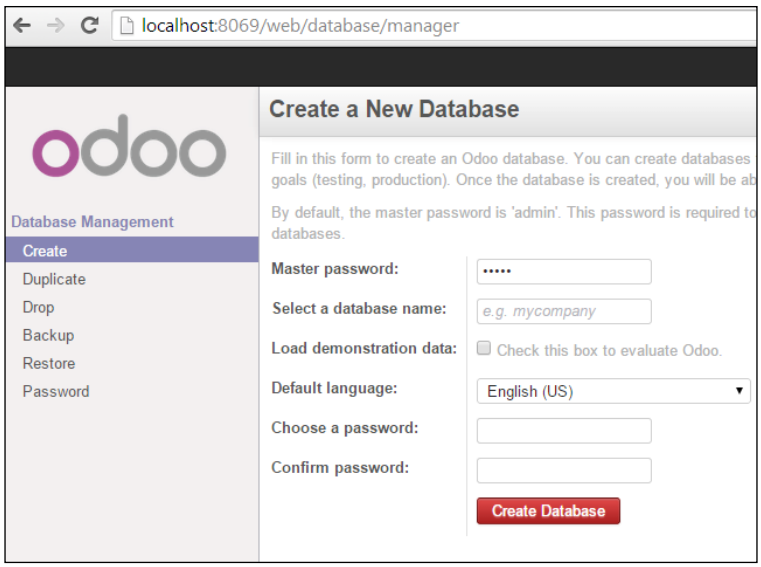
- Know exactly how much downtime costs your business and plan accordingly. Companies such as eBay and Amazon are in crisis if they are down for even a few minutes. More than an hour of downtime for them would make international news. While you may not have their uptime requirements, it is important that you understand exactly what risk your business does face if your Odoo installation goes down for two minutes, two hours, or even two days.

Backing up your Odoo database

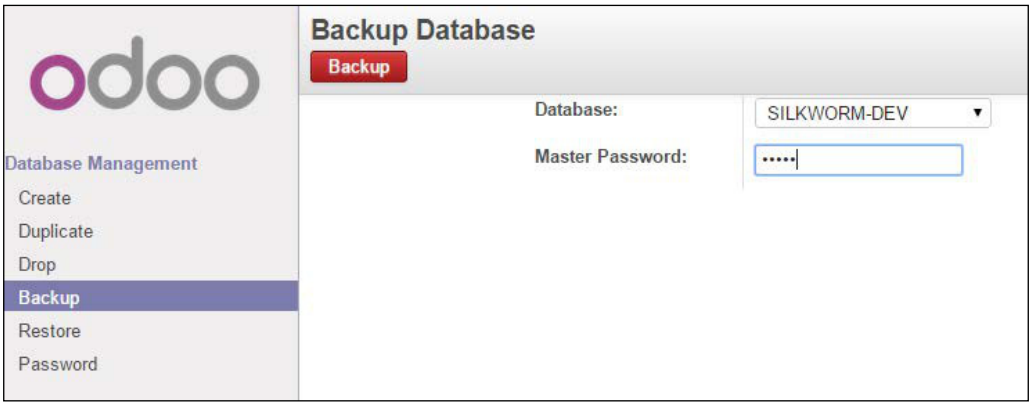
It is critical in a production environment that, at minimum, you back up both your working Odoo application directories and the associated Postgres databases. Ideally, you will have server snapshots and a clear, tested business continuity plan in place. Still, it is valuable to know that Odoo provides a built-in database backup tool. I use it frequently in a variety of Odoo installations.

Before going ahead, it should be noted that this function will not be applicable to all Odoo installations. If you are running in a hosted Odoo environment where you have been provided a login and password to your database, then you will be provided with a specific backup procedure. Make sure you fully understand how it works and have a way to test and ensure that it functions as expected.

The easiest way to get to the backup database function is to navigate directly to the database manager. By adding `/web/database/manager` to the end of your Odoo URL, you will be taken directly to the Odoo database manager. The **Create a New Database** form will appear:



In the left menu under **Database Management**, you will see the **Backup** option. You may click this to bring up the Odoo Backup Database utility.



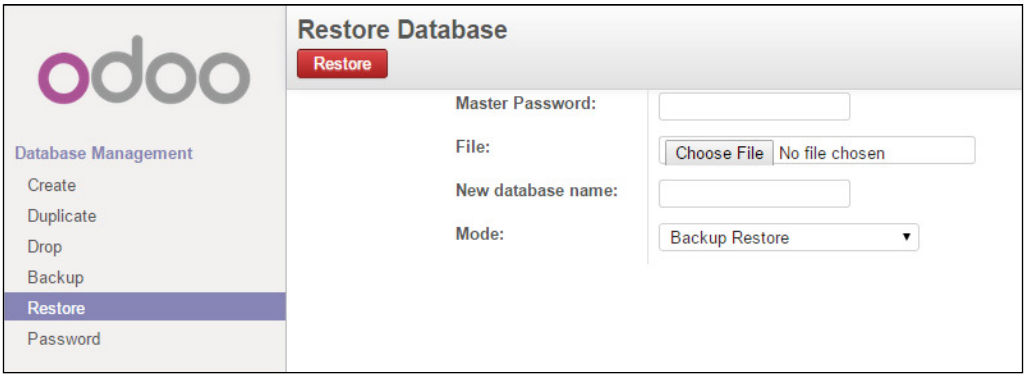
Sometimes if you are having trouble with an Odoo installation, such as internal server errors and other system-related issues, you can navigate directly to the database manager to back up your database and perform operations that may help you recover from the problem.

You can use the pop-up list to select the database you wish to back up. Then, provide the **Master Password**. By default, this master password is admin. If the password is wrong, you will receive an **Access Denied** error.

Once you have selected the database and provided a valid master password, click the **Backup** button to begin backing up the database. The database will then download through your browser just like any other file you download from the Internet. If your database is extremely large, there is a chance that the file may not be easily downloaded.

Restoring an Odoo database

The ability to back up a database does little good unless you have the ability to restore the database and get it up and running again. Click the **Restore** button in the **Database Management** menu to bring up the **Restore Database** form:



Here, specify the master password and choose the file you wish to restore. Once you have the file selected, you will need to specify a new database name within which the database will be restored.

You also get the option to choose either **Backup Restore** or **Copy of an existing database** as the **Mode** for restoration.

Administering users in Odoo

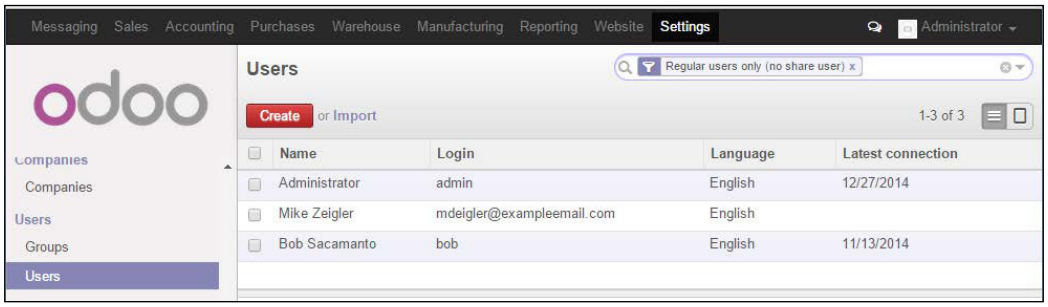
In any ERP system, it is important to understand completely how users and user access rights are managed. When Odoo is first installed, an admin account is created automatically. This is a superuser account, and it is the only one like it. In some systems, any account can be given full administration privileges. Odoo, however, gives permissions to the administration account that no other user in the system has.

Specifically, all access rights are bypassed when using the administrator account. Much like the root account in Linux or Ubuntu, you always need to protect your administration account by using a strong password and keeping it secret.

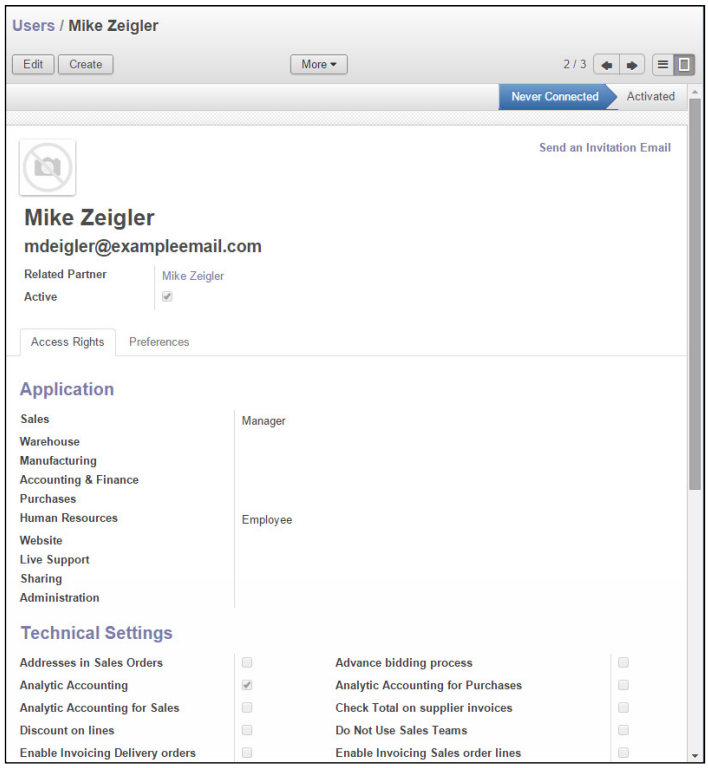
Selecting a user to administer

Let's begin looking at how to select a user in Odoo and how they are tied to partner records within the rest of the Odoo applications.

To access the list of users, click on **Settings** in the main menu and then select **Users** under the **Users** section in the left-hand side menu:



Click on **Mike Ziegler** to bring up the user and look at the additional options that are available:

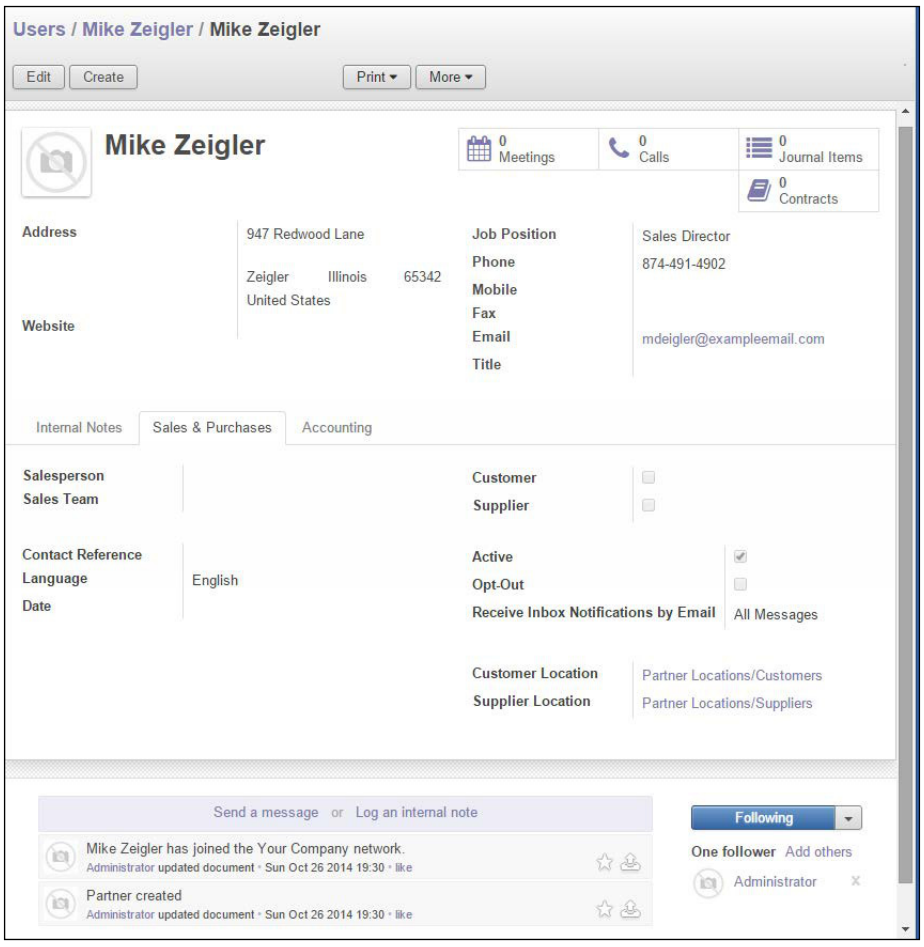


When you pull up a user in your own Odoo installation, it is unlikely that the contents of the preceding screenshot will look exactly like yours. Depending on the types of applications installed, the available application and technical settings will change. Also, it is common to see different versions of this window depending on the Odoo build you are running.

Understanding related partners

In Odoo, every company, customer, vendor, and user has a related partner record. In the user window, you can see the specified related partner for that user along with a hyperlink to bring up the partner record.

Go ahead and click the related partner link **Mike Zeigler** to bring up the partner record:

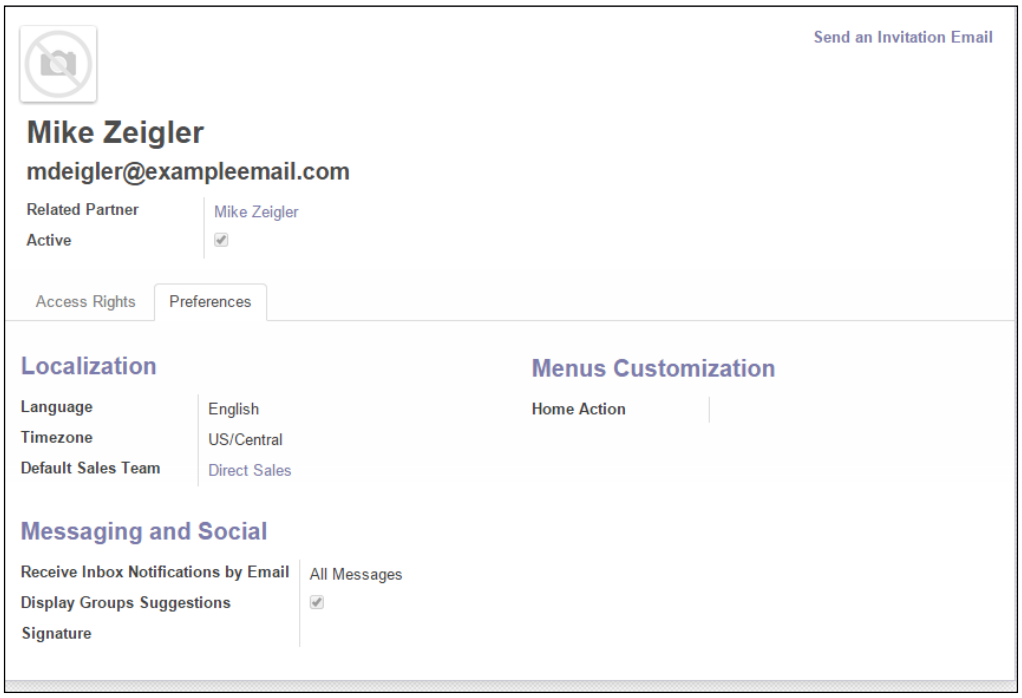


Here, we have selected the **Sales & Purchases** tab in the form so you can see that the **Customer** and **Supplier** checkboxes are not selected. If we wished, we could make Mike Zeigler a customer and/or a supplier in addition to being a user by selecting the appropriate checkbox. In many systems, there are separate files for vendors, customers, and employees. Odoo, however, considers every person a partner. In this case, this is the partner record for Mike Zeigler. We have filled in a little bit of address information.

When managing users, just remember that if you can't find what you are looking for inside the user record, it may be inside the associated partner record.

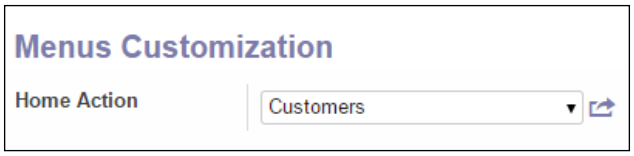
Managing user preferences

Using the breadcrumbs at the top of the form, we can navigate back to the user record and take a look at the preferences page:



In this section, we can specify important localization options that can dramatically change the user experience. We can specify one of the many dozen languages that Odoo supports, as well as the timezone and default sales team of the user.

Under the **Menus Customization** section, we can specify **Home Action** for our user. This is the action we want to occur when a user logs in to Odoo or when they navigate to the home page of the installation. Odoo provides friendly names for the various operations in the system.



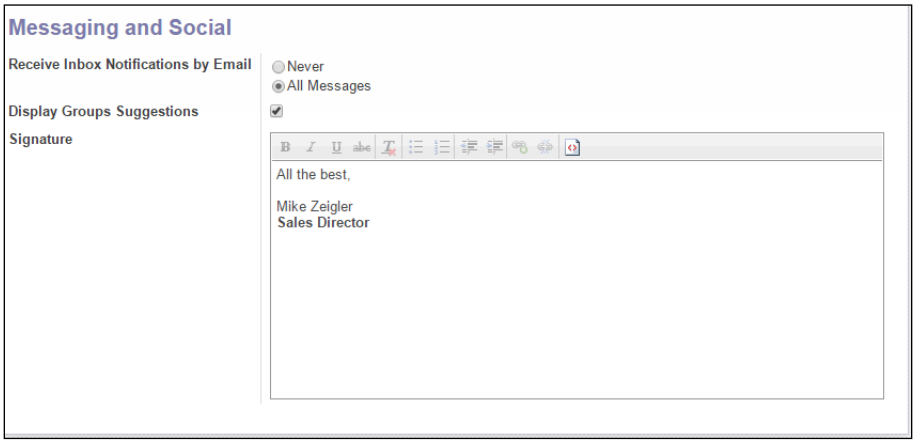
In the preceding example, we have set **Home Action** to **Customers**. The next time Mike logs in to Odoo, he will automatically be taken to the Customers listing in Odoo.

Finally, the **Preferences** section lets you manage your **Messaging and Social** options for the user.

Currently, there are only two options to receive inbox notifications by e-mail. Either he will never receive notifications or he will receive all the messages. You also can ask Odoo to display suggested groups for the user to join. Odoo makes this determination based on other users in the system, what sales teams they have joined, and other factors.

Finally, you can use the **Signature** rich text area at the bottom to specify a signature footer for the emails sent by this user.

If desired, the user can change their own signature at any time by choosing **Preferences** from the menu in the upper right-hand corner of the screen.

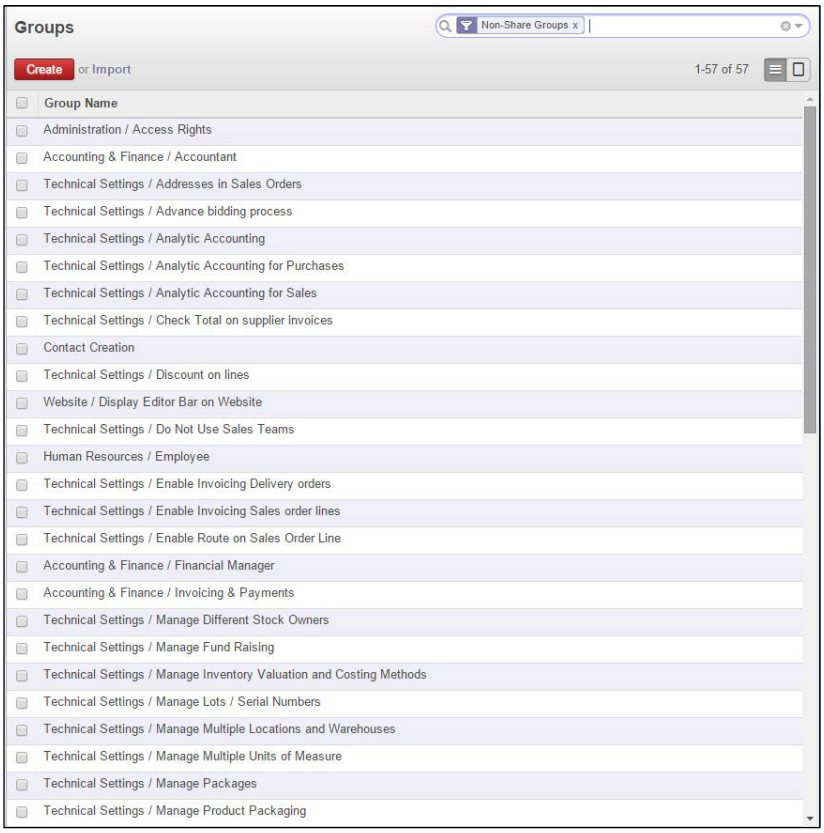


Remember that if you are an administrator making these changes for another user, changing these settings will require that user to log out of the system so that their session is updated with the changes.

If you are setting up multiple users, don't forget that you can use the **Duplicate** option under the **More** menu at the top of the form to make a copy of a user. This can be handy if an employee has left and has been replaced by another. You can deactivate the old employee profile and duplicate it for the new employee.

Understanding groups in Odoo

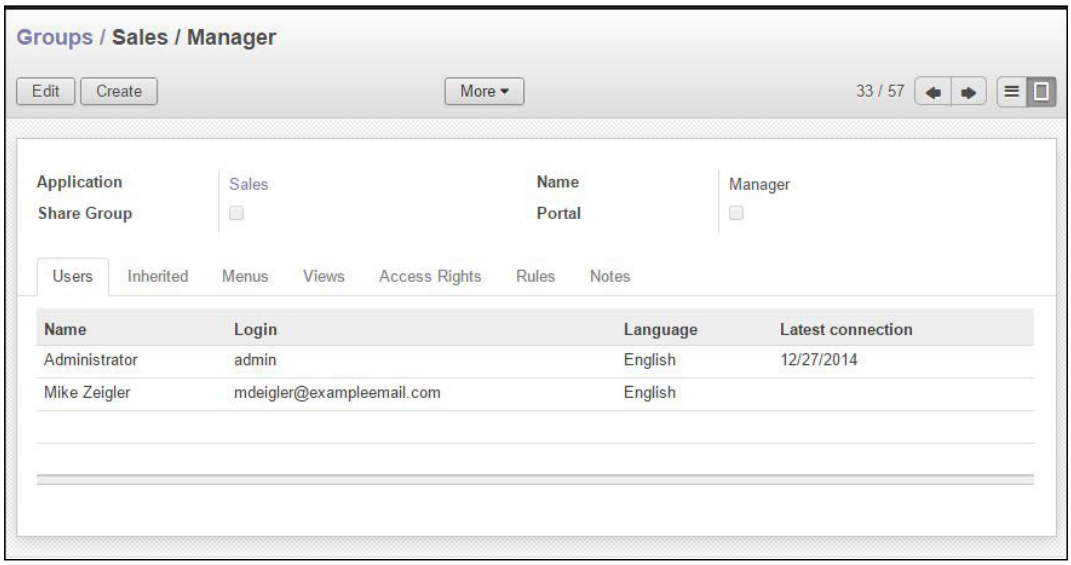
In Odoo, you give users permissions by assigning them to groups. Once a user is assigned to a group, they have all the permissions and options that are associated with that group. Users can belong, and often do belong, to more than one group. To see the list of groups that are currently available in your Odoo installation, go to the **Settings** menu at the top and then choose **Groups** under the **Users** section on the left.



As you will see, Odoo has several groups. Fortunately, once you understand how groups work, you will easily be able to determine exactly what options are available to a user when you put them in a specific group.

For our example, let's examine the **Sales / Manager** group. You can find this group by scrolling down the list of groups or use the search to narrow the list until you can find the group you are looking for.

As with other lists, clicking on the **Sales / Manager** group in the list of groups brings up the form:



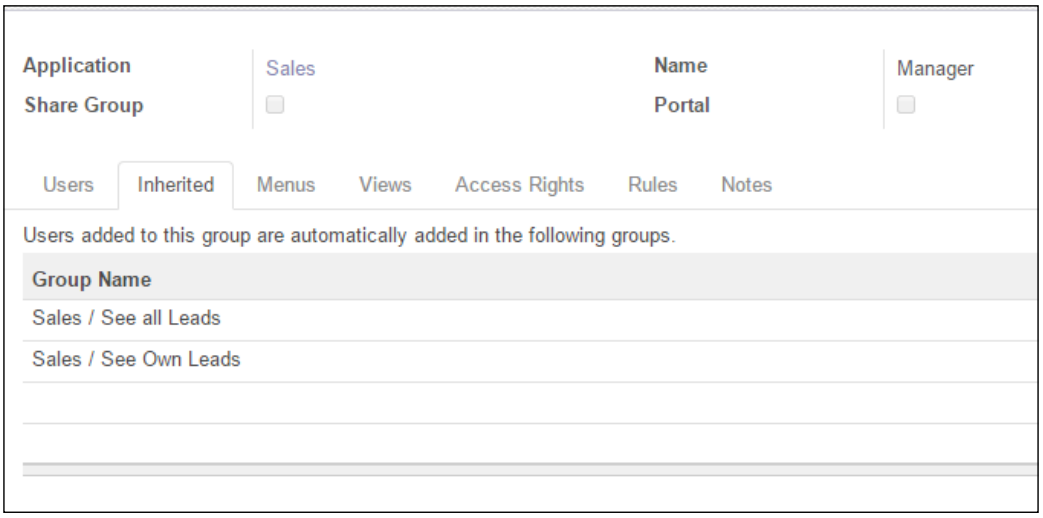
At the very top of the form on the left, you can see that a group is always associated with a given application. In this case, the group is associated with the **Sales** application. On the right is the name: **Manager**. Odoo automatically adds the / in between the application and the name when displaying the full name in the list.

As you can see, the first page lists users that are assigned to the group. Naturally, you can add and remove users from this group as required. You will also notice there are seven pages on this form that you will be using to configure exactly what permissions this group will offer to member users.

Understanding group inheritance in Odoo

Managing access permissions in any ERP system is always a challenge. Odoo makes managing user permissions easier by allowing you to inherit permissions from multiple groups and then define a new group that automatically includes all the permissions from those groups. With proper planning, you can create groups that provide your users with the permissions they require.

Let's take a look at the groups inherited by the **Sales / Manager** group.

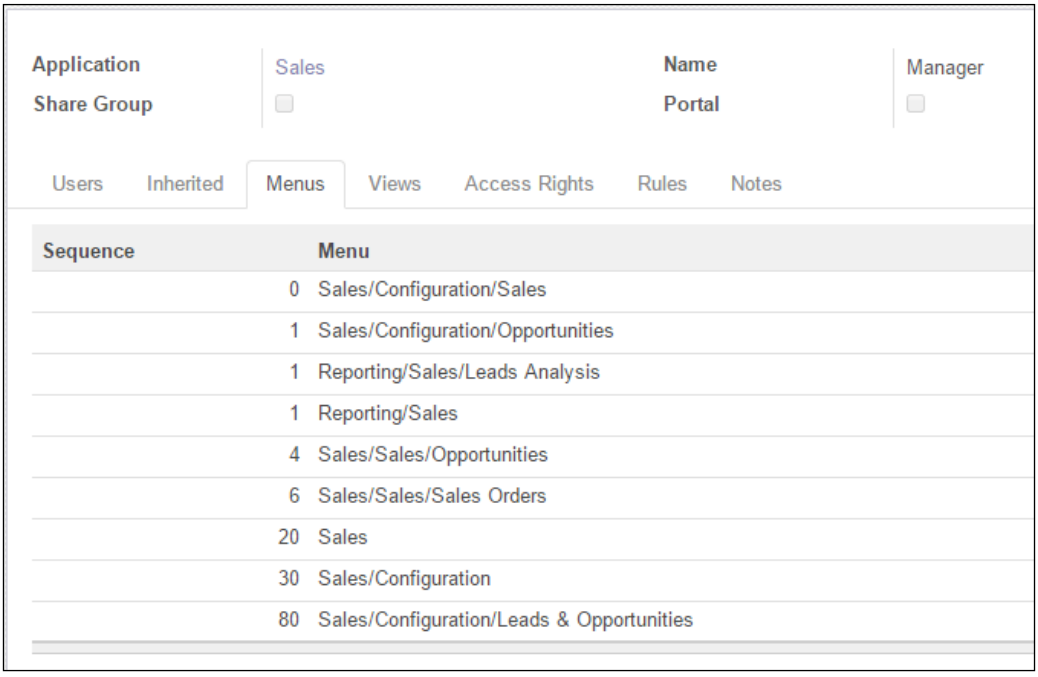


The **Sales / Manager** group has both the **See All Leads** and the **See Own Leads** groups included in the **Inherited** list. Just like the instructions say, users added to the **Sales / Manager** group will automatically be added into the **See All Leads** and **See Own Leads** groups.

With this in mind, manager groups such as this will most often include all the other groups that have more restrictions in the system. In this case, looking at the **See Own Leads** group will let you see the most restrictive group permissions for the Sales group.

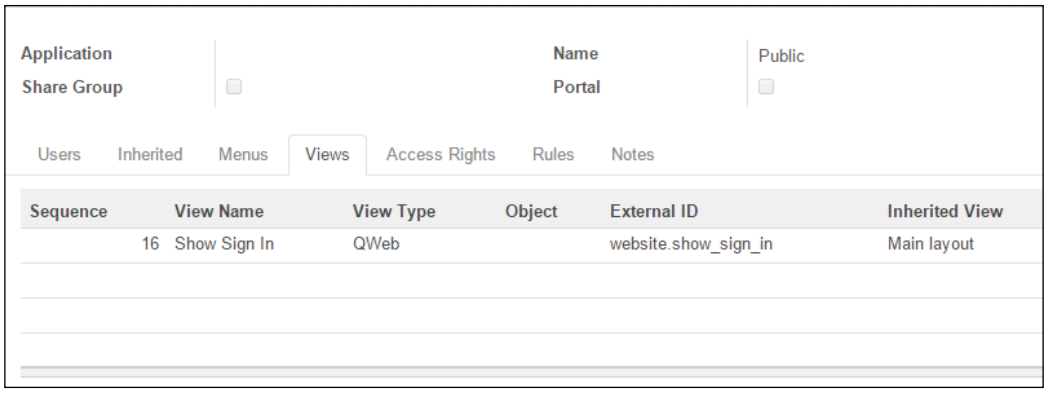
Defining menus for your group

Groups provide you with a direct way to determine which menus users in that group have access to. In the case of the **Sales / Manager** group, we have additional menu options listed. Members of the **See all Leads** or the **See Own Leads** groups will not see these menus unless they are also members of **Sales / Manager**.



If, for example, you wanted to allow users in the **See All Leads** group to view the **Leads Analysis** report, you could remove the menu from the list in this manager group and add the menu to the **See All Leads** group. Because the manager group inherits from the **See All Leads** group, they will still be able to see the menu in addition to users that are only in the **See All Leads** group.

Now with the new website applications, Views can be used to limit what information is displayed on a web form. In the following example, we can see how the public group has rights to the view that allows them to log in to the website.



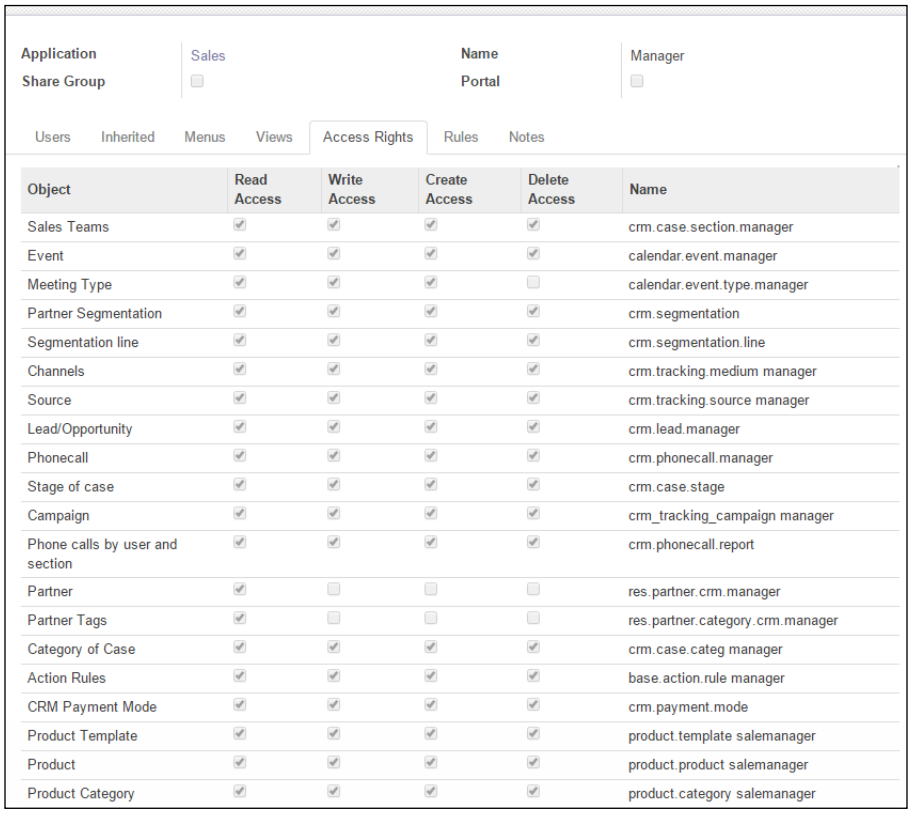
Application | Name: Public
Share Group | Portal

Users | Inherited | Menus | Views | Access Rights | Rules | Notes

Sequence	View Name	View Type	Object	External ID	Inherited View
16	Show Sign In	QWeb		website.show_sign_in	Main layout

Also, notice that views can inherit from other views. In this case, the **Show Sign In** view is inheriting from the **Main layout** view.

You can expect that there will be more administration of Views and their groups in future versions of Odoo as more website tools are developed.



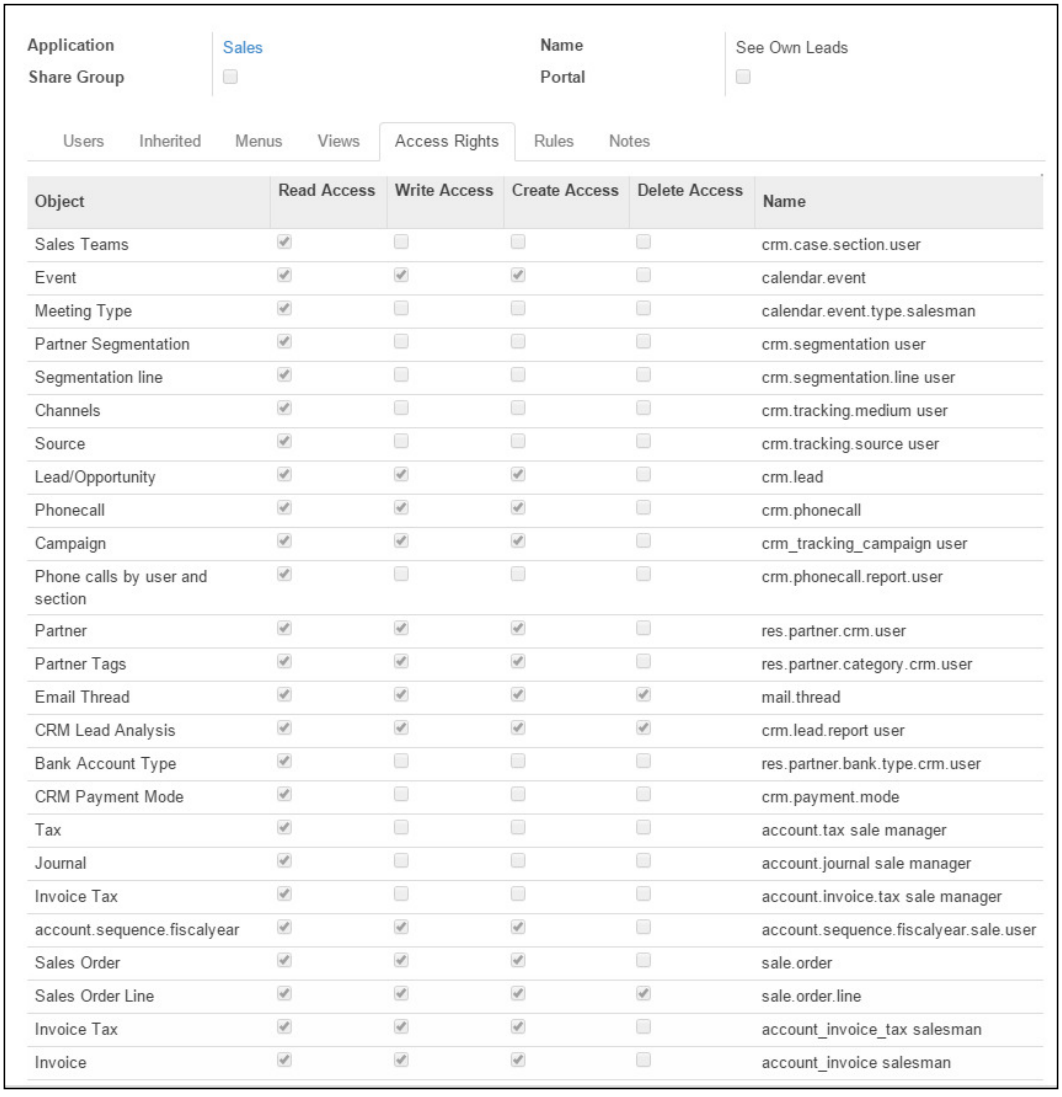
Application: Sales | Name: Manager
Share Group | Portal

Users | Inherited | Menus | Views | Access Rights | Rules | Notes

Object	Read Access	Write Access	Create Access	Delete Access	Name
Sales Teams	☑	☑	☑	☑	crm.case.section.manager
Event	☑	☑	☑	☑	calendar.event.manager
Meeting Type	☑	☑	☑	☐	calendar.event.type.manager
Partner Segmentation	☑	☑	☑	☑	crm.segmentation
Segmentation line	☑	☑	☑	☑	crm.segmentation.line
Channels	☑	☑	☑	☑	crm.tracking.medium manager
Source	☑	☑	☑	☑	crm.tracking.source manager
Lead/Opportunity	☑	☑	☑	☑	crm.lead.manager
Phonecall	☑	☑	☑	☑	crm.phonecall.manager
Stage of case	☑	☑	☑	☑	crm.case.stage
Campaign	☑	☑	☑	☑	crm_tracking_campaign manager
Phone calls by user and section	☑	☑	☑	☑	crm.phonecall.report
Partner	☑	☐	☐	☐	res.partner.crm.manager
Partner Tags	☑	☐	☐	☐	res.partner.category.crm.manager
Category of Case	☑	☑	☑	☑	crm.case.categ manager
Action Rules	☑	☑	☑	☑	base.action.rule manager
CRM Payment Mode	☑	☑	☑	☑	crm.payment.mode
Product Template	☑	☑	☑	☑	product.template salemanager
Product	☑	☑	☑	☑	product.product salemanager
Product Category	☑	☑	☑	☑	product.category salemanager

Access Rights is where you define exactly what models the group has access to. In Odoo, the term model represents a business entity object and its related operations. You can determine for each object if the group should have any combination of Read, Write, Create, or Delete access. For example, in the preceding listing, we can see the Sales / Manager group has the ability to read, write, and create meeting types, but they cannot delete meeting types.

Now, let's take a quick look at the access rights of the **See Your Own Leads** group.



Application	Sales	Name	See Own Leads
Share Group	☐	Portal	☐

Users | Inherited | Menus | Views | Access Rights | Rules | Notes

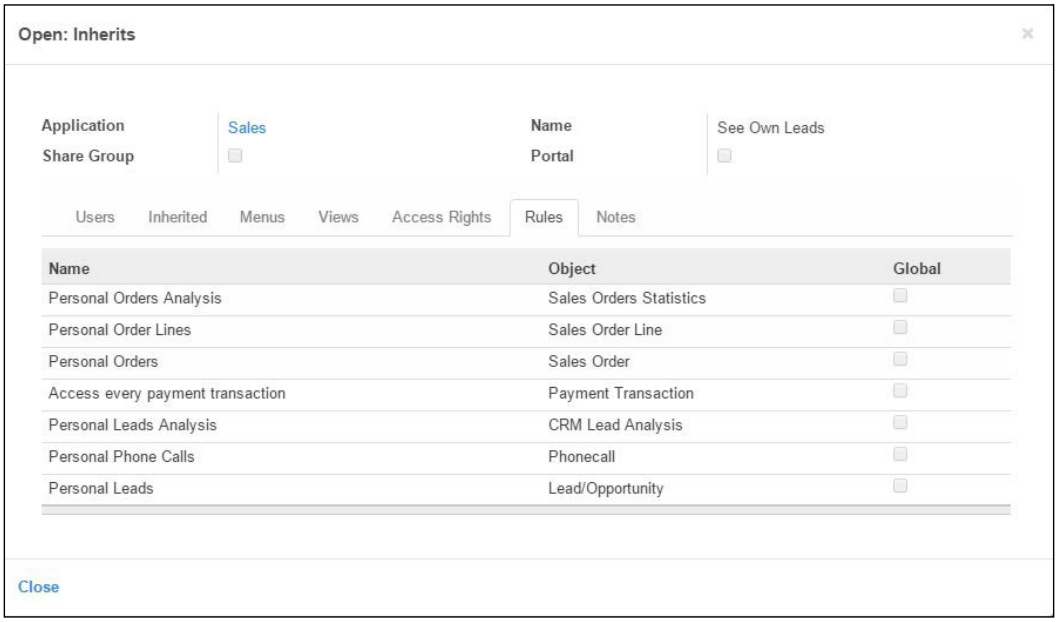
Object	Read Access	Write Access	Create Access	Delete Access	Name
Sales Teams	☑	☐	☐	☐	crm.case.section.user
Event	☑	☑	☑	☐	calendar.event
Meeting Type	☑	☐	☐	☐	calendar.event.type.salesman
Partner Segmentation	☑	☐	☐	☐	crm.segmentation user
Segmentation line	☑	☐	☐	☐	crm.segmentation.line user
Channels	☑	☐	☐	☐	crm.tracking.medium user
Source	☑	☐	☐	☐	crm.tracking.source user
Lead/Opportunity	☑	☑	☑	☐	crm.lead
Phonecall	☑	☑	☑	☐	crm.phonecall
Campaign	☑	☑	☑	☐	crm_tracking_campaign user
Phone calls by user and section	☑	☐	☐	☐	crm.phonecall.report.user
Partner	☑	☑	☑	☐	res.partner.crm.user
Partner Tags	☑	☑	☑	☐	res.partner.category.crm.user
Email Thread	☑	☑	☑	☑	mail.thread
CRM Lead Analysis	☑	☑	☑	☑	crm.lead.report user
Bank Account Type	☑	☐	☐	☐	res.partner.bank.type.crm.user
CRM Payment Mode	☑	☐	☐	☐	crm.payment.mode
Tax	☑	☐	☐	☐	account.tax sale manager
Journal	☑	☐	☐	☐	account.journal sale manager
Invoice Tax	☑	☐	☐	☐	account.invoice.tax sale manager
account.sequence.fiscalyear	☑	☑	☑	☐	account.sequence.fiscalyear.sale.user
Sales Order	☑	☑	☑	☐	sale.order
Sales Order Line	☑	☑	☑	☑	sale.order.line
Invoice Tax	☑	☑	☑	☐	account_invoice_tax salesman
Invoice	☑	☑	☑	☐	account_invoice salesman

The manager group we looked at previously had a lot of permissions to create and write records; but the **See Own Leads** group only has read access for many objects, such as Meeting Type, Channels, Tax, Journal, and so on. This group can see the information, and it can be selected on forms and reports, but they do not have permission to modify records in those objects.

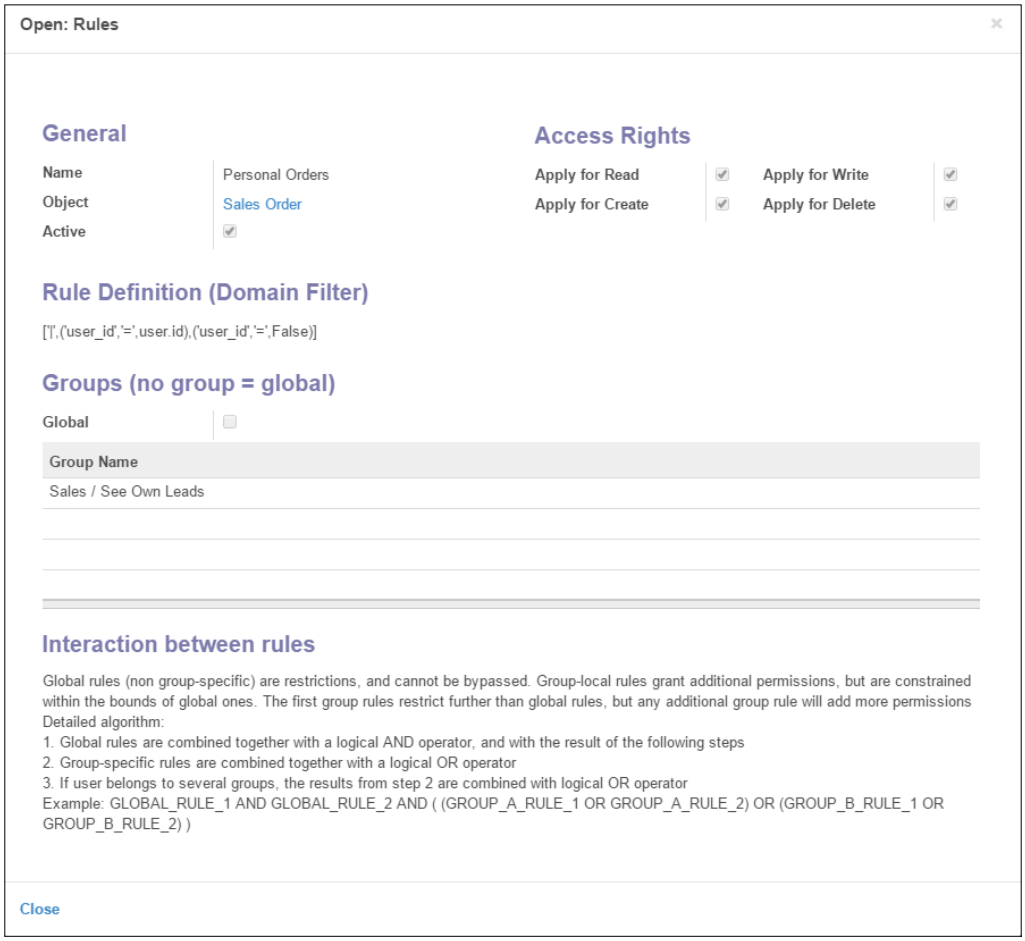
Understanding record rules in Odoo

Sometimes in a system, you want users to have access to a particular model but not to all the records in that model. For example, you may want users to have access to phone calls within the system. But, for some groups, you only want the user to have access to the records of their own phone calls, not the phone calls of everyone in the system. When you need to control user access based on the contents of records within a model, you can define **Rules**.

For this example, we are looking at the rules for the **See Own Leads** group. Because this is a highly restricted group, there are many rules that limit users in this group to only see the records that are personally associated with them.



Typically, manager groups will have few or no rules because they do not have restrictions on what records they can access. Groups such as **See Own Leads** have quite a few rules so that the users can't see records that do not belong to them. Let's take a quick look at the **Personal Orders** rule to see how we can construct a rule that limits what records a user can access.



Odoo provides a pretty good description at the bottom of the form on how rules interact. If no groups are specified in the list, this means this rule will apply to everyone—all groups. As you can see on the right, you can specify the access rights for this rule. So you could have a rule in which a user can access (read) certain records, but they cannot create, write, or delete records.

The most important part of the rule is the **Rule Definition** or **Domain Filter**. This filter is applied to each record to determine whether that record should be available. While the syntax may look cryptic, you can see that the system is checking whether the user ID is equal to the current user ID. This filter will be true if you are specifically looking at your own records or records that have not been assigned to any specific user.

When making your own rules, copy and paste the rules from a similar rule to make it easier to get the syntax right. Also, be careful about changing rules in a live system. It is possible that an error in your syntax could make it impossible to access certain parts of the system.

Internationalization in Odoo

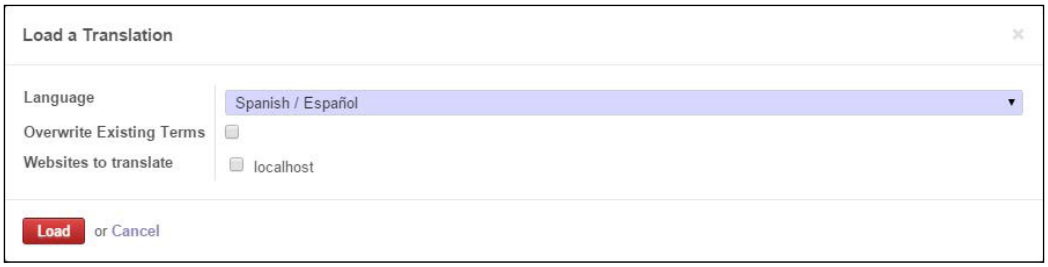
Even with a conventional English installation of Odoo, it is possible to configure it to work with a variety of languages, time zones, and currencies without downloading any additional add-ons. Odoo has robust features for configuring a global ERP system that can meet the demands of today's multicultural business environment.

As with most Odoo features, you only need to configure the international features you require for your business. For example, you may do business entirely in US dollars but would like to offer Odoo in Spanish for some of your workstations, users, or portal customers. On the other hand, if you are purchasing from a supplier in an alternative currency, you may choose to create a special price list that allows you to do business in that currency.

Configuring language translation

Like many of the other options in Odoo we have discussed, business requirements should drive how you configure your system. For our real-world example, it has become increasingly desirable to offer a native Spanish Odoo interface for some employees. Let's see how we can configure Odoo to provide other language alternatives.

Fortunately, Odoo makes this very easy. Under the **Settings** menu, simply choose **Load a Translation** under the **Translations** section on the left.

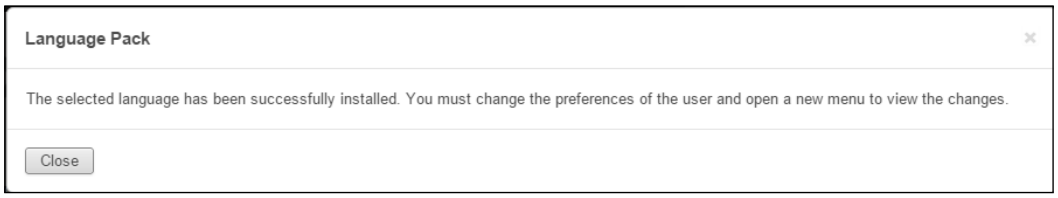


You will find quite a few languages to choose from in the list. At the time of writing this book, there are more than 80 languages to choose from.

Many of these languages are community supported and translation will certainly vary. Furthermore, ERP systems can often be confusing even for users that speak the language fluently. Take the time to train users so they understand all their processes well.

You should use **Overwrite Existing Terms** if you have made custom modifications to a language translation and now wish to overwrite them. You also can tell Odoo to perform a translation on the websites as well.

After the language is loaded, you will get a confirmation message and instructions on the next step you need to take to begin using the installed language:



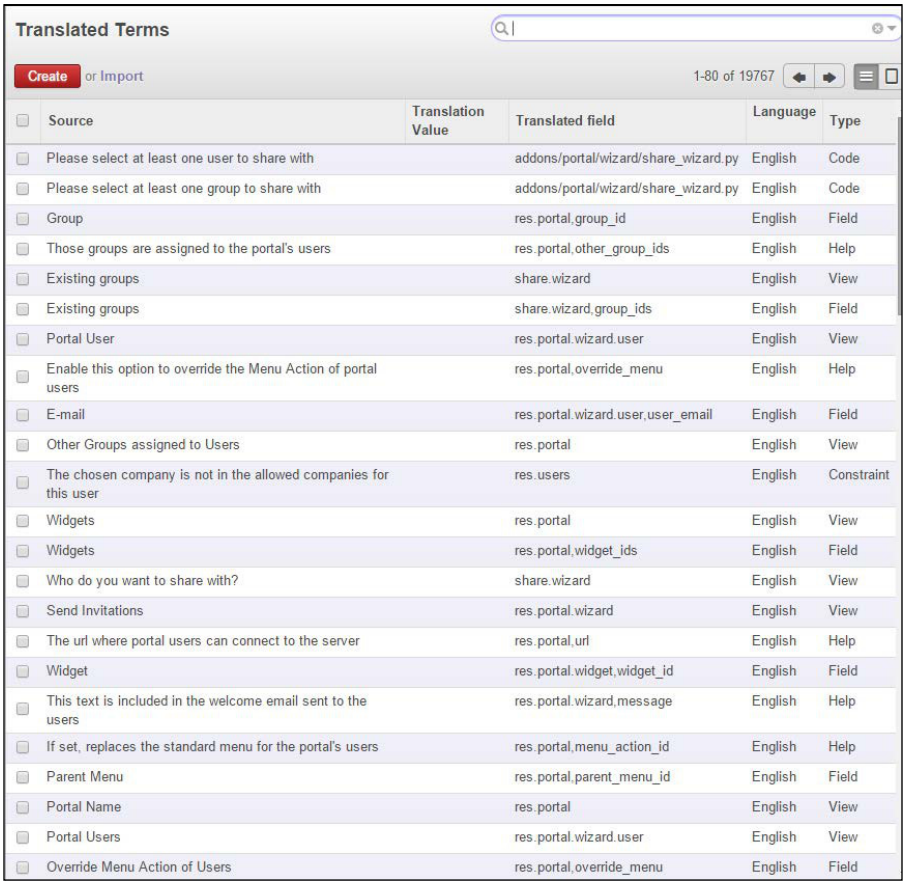
Now that we have installed the new language, we can assign that language to our users and even our customers and suppliers. As seen in the following screenshot, we have set Mike Zeigler's language choice to Spanish. Odoo also allows you to specify the timezone either by the GMT offset or by common regions. In this case, we have chosen Cancun as the timezone.

After the changes are saved and the user has logged back in, we will see that their interface has changed over to Spanish.

Using translation features to customize Odoo for your business

Even if you do not plan to use Odoo's translation features for alternative languages, they can be useful to change forms to better fit a given business requirement.

To see the translated terms for a given language, navigate to **Settings**, and under **Application Terms**, choose **Translated Terms**.



Translated Terms

Create or Import 1-80 of 19767

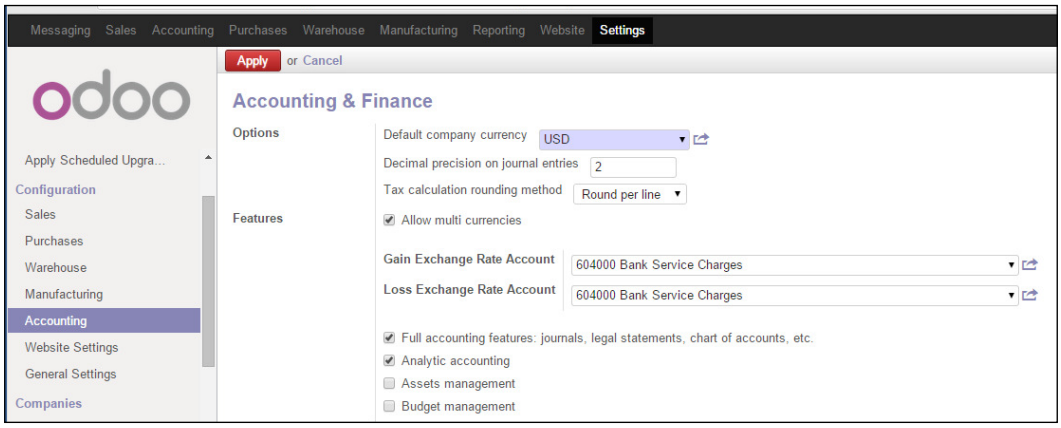
Source	Translation Value	Translated field	Language	Type
Please select at least one user to share with		addons/portal/wizard/share_wizard.py	English	Code
Please select at least one group to share with		addons/portal/wizard/share_wizard.py	English	Code
Group		res.portal,group_id	English	Field
Those groups are assigned to the portal's users		res.portal,other_group_ids	English	Help
Existing groups		share.wizard	English	View
Existing groups		share.wizard,group_ids	English	Field
Portal User		res.portal.wizard.user	English	View
Enable this option to override the Menu Action of portal users		res.portal,override_menu	English	Help
E-mail		res.portal.wizard.user,user_email	English	Field
Other Groups assigned to Users		res.portal	English	View
The chosen company is not in the allowed companies for this user		res.users	English	Constraint
Widgets		res.portal	English	View
Widgets		res.portal,widget_ids	English	Field
Who do you want to share with?		share.wizard	English	View
Send Invitations		res.portal.wizard	English	View
The url where portal users can connect to the server		res.portal,url	English	Help
Widget		res.portal.widget,widget_id	English	Field
This text is included in the welcome email sent to the users		res.portal.wizard,message	English	Help
If set, replaces the standard menu for the portal's users		res.portal,menu_action_id	English	Help
Parent Menu		res.portal,parent_menu_id	English	Field
Portal Name		res.portal	English	View
Portal Users		res.portal.wizard.user	English	View
Override Menu Action of Users		res.portal,override_menu	English	Field

Notice that in the second-last column the first page has all English translations and that the record count is 19,767. Nearly every message, menu, and label in Odoo is driven off the translations in this table. That is how Odoo can easily adapt and support dozens of languages; but we can also use these translations to change terms to make them more business-friendly for our requirements. For instance, you could change Fiscal Position in Sales to Tax Status or change Meetings in the Calendar module to Activities. Neither will affect how the system works; these are just labels.

International currencies

As you saw, it was quite easy and straightforward to configure Odoo for multiple languages. Currencies, however, will require more planning and testing during system configuration. Unlike languages, multiple currencies have the ability to directly modify the amount of money you are receiving or paying out. If the system has misconfigured currency settings, you are almost guaranteed to have inaccurate transactions within your system at some point. Make sure you thoroughly test all scenarios when working with multiple currencies in Odoo or any other ERP system.

To set up multiple currencies in Odoo, navigate to the **Settings** menu and select **Accounting** under the **Configuration** settings:



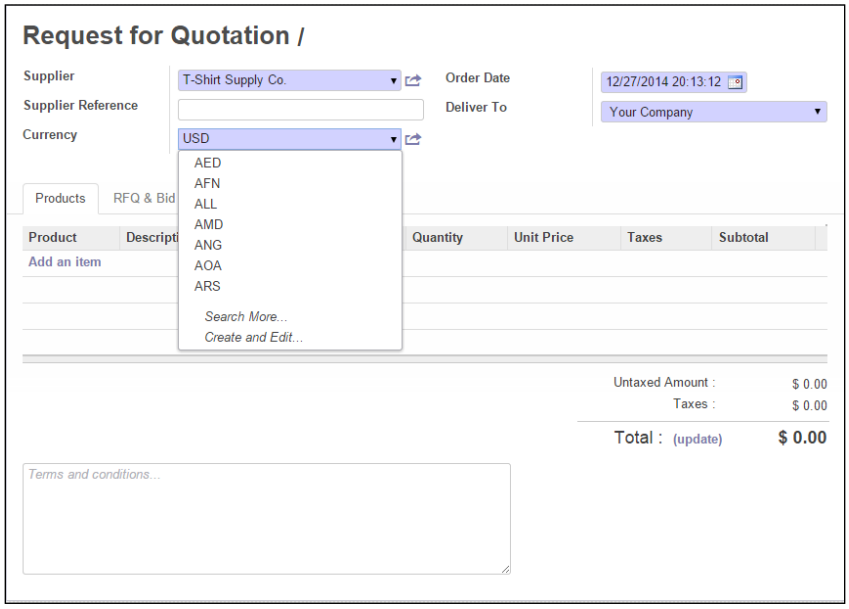
Under **Features**, the first option is **Allow multi currencies**. Check this and you will get the option to select the accounts to which the differences between exchange rates will be posted. When setting up a full production system, you will want to assign appropriate accounts as discussed in *Chapter 6*, *Configuring Accounting Finance*. However, you can post to Bank Service Charges as an appropriate typed income/expense account for the purpose of this example.

Once you click on **Apply**, Odoo will work for a few seconds and then return you to the same screen. You will not notice the changes in multicurrency until you look at how some of your documents now appear in Odoo.

As with configuring other Odoo options, it is a good idea to use *Shift + refresh* in your browser to force Odoo to present any new menus or settings resulting from your changes.

Purchasing in a different currency

After you select multicurrency, the purchasing system immediately allows you to begin purchasing products in alternative currencies. Create a new purchase order and observe the new currency selection available at the top of the form.



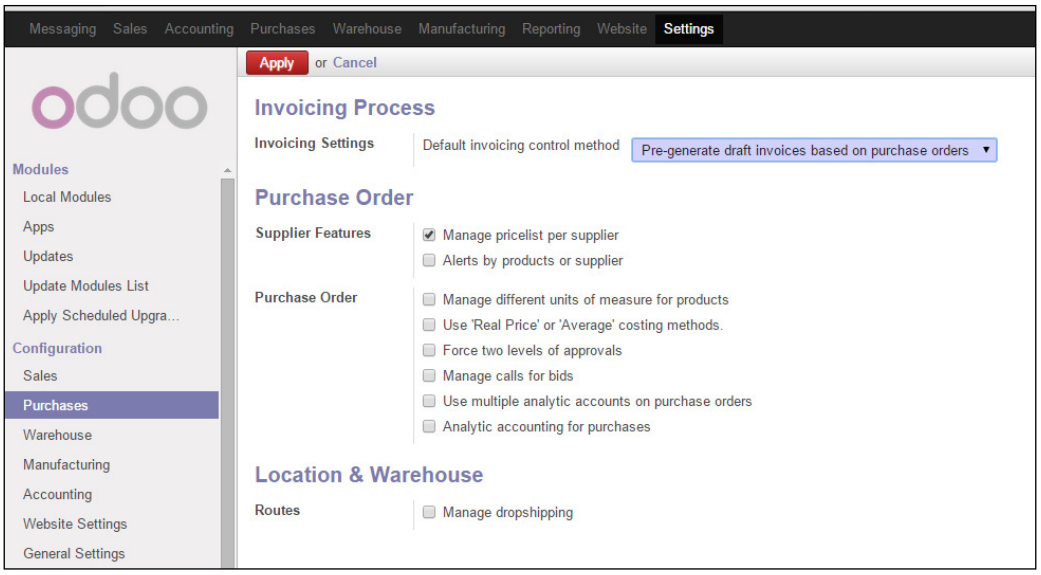
At the time of writing this book, there are 160 currencies in the list. Once you choose a currency, you will see the symbol change at the bottom of the purchase order to show that you are now purchasing in the new currency.

If you continue, however, and try to add a product to your purchase order, you will quickly find out that unit cost does not auto-populate from the cost you have specified in the product file. As you are now using multiple currencies, either you need to provide detailed pricing information, or you must enter the amount on each purchase order you create.

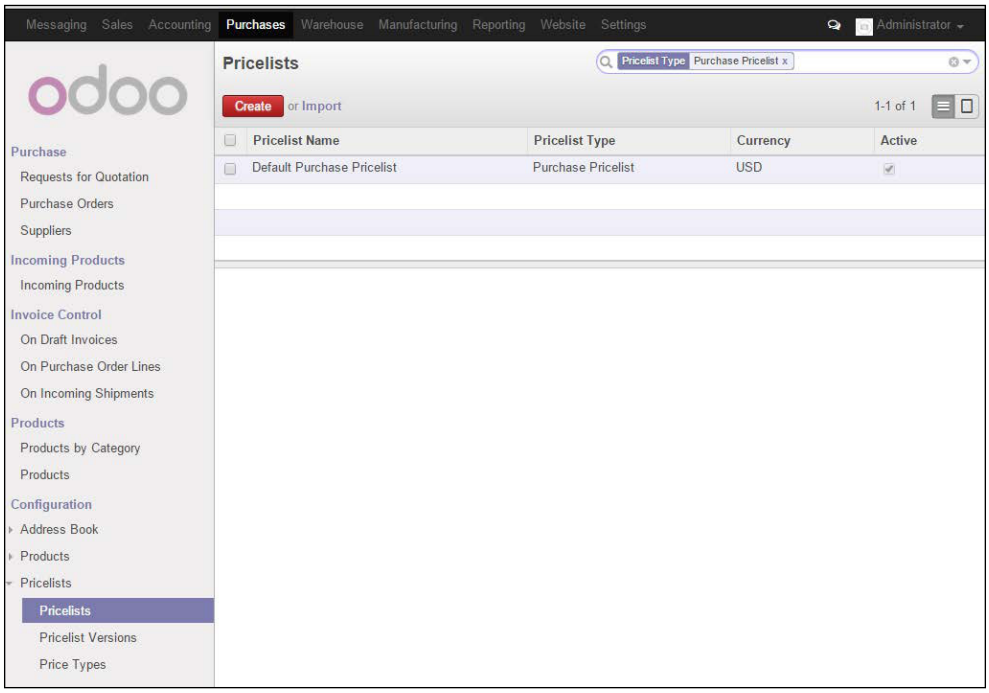
Managing supplier price lists

Now that we know we are going to have suppliers from whom we need to purchase in a different currency, let's see how we can set up a price list for this alternative currency so that when we order products, we do not have to re-enter our costs.

We must first turn on multiple supplier price lists. Select **Settings** and then **Purchases** under the **Configuration** section. There, check the **Manage pricelist per supplier** option and click on **Apply**.



After we have turned on the option to manage pricelists per supplier, in the **Purchase** menu, we can expand the **Pricelists** section under **Configuration** and choose **Pricelists** to see the one default pricelist that is already installed.



Before making any changes to your existing configuration or adding a new pricelist to your own system, I highly recommend you look at how the existing pricelist is configured. Fortunately, adding a price list for the EUR currency is easy. Create a **Default Purchase Pricelist** and simply give it the EUR currency. The rule is a minimum quantity of zero. This way the pricelist will apply to any product.

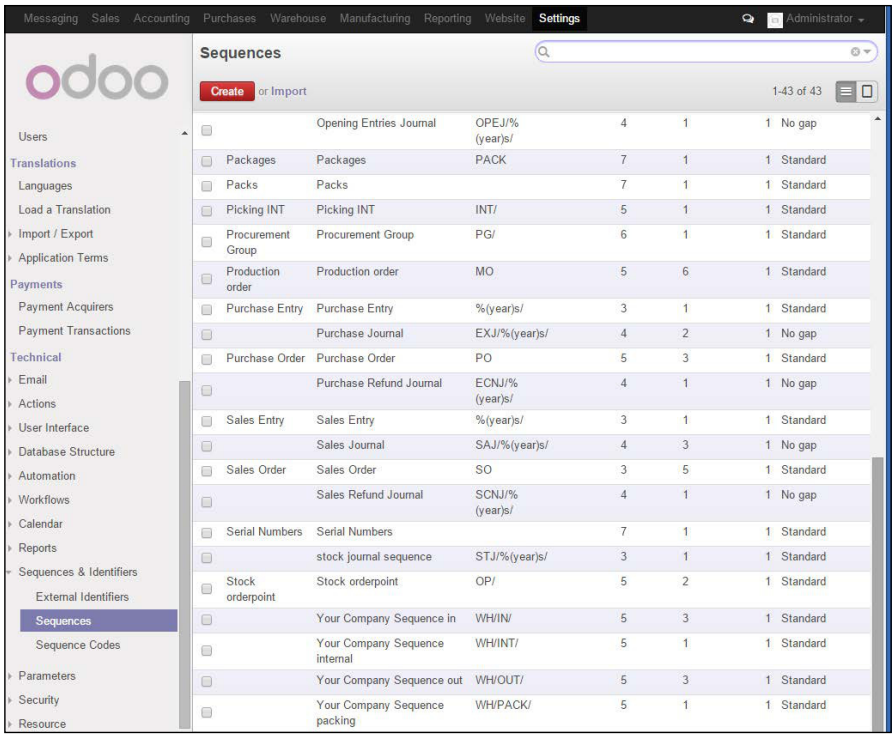
Here is the pricelist record configured to handle the EUR currency:

Now we can assign this pricelist and use it to price products in EUR within our purchasing system.

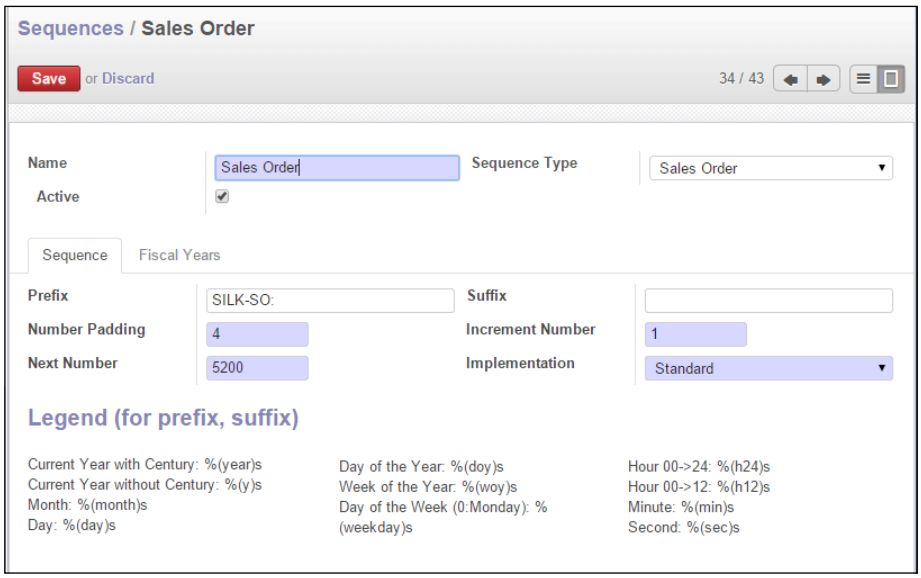
Managing sequences in Odoo

When you are setting up a system for your business, there is a very good chance that the default naming of documents and the number sequences that Odoo defines may not be ideal. A simple example is that you most likely do not want your invoices starting at number 00001 when you may already have produced thousands of invoices. You would want the numbers to start where the old system left off.

Additionally, sequences in Odoo don't just manage the numbering of your documents. They also manage how the document name looks inside Odoo. To see the current sequences defined by Odoo, navigate to the **Settings** menu and choose **Sequences** under **Sequences & Identifiers**.



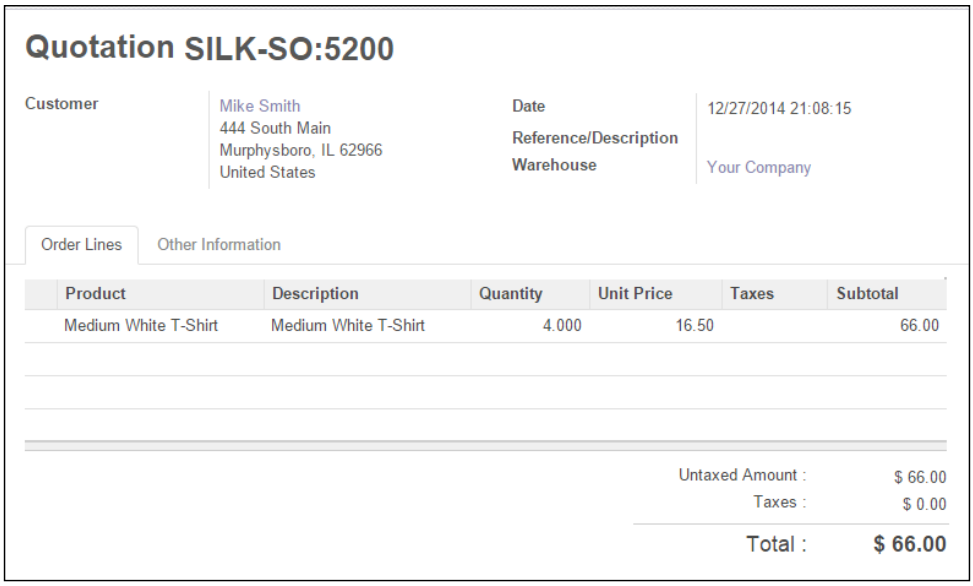
Here, we have scrolled down so you can see the sales order sequence. Click on it to bring up its details.



The prefix SO is generic and could potentially match a document identifier from another company.

For this example, we have changed the **Prefix** of the sales orders in our Odoo installation so that they will begin with `SILK-SO`. It is common in a business situation that you may wish to prefix your documents with a notation that identifies that document specifically to your company. Also, notice we have bumped up the **Next Number** to 5200.

After you save the changes to the sequence, any new documents will now use the new sequence definition.

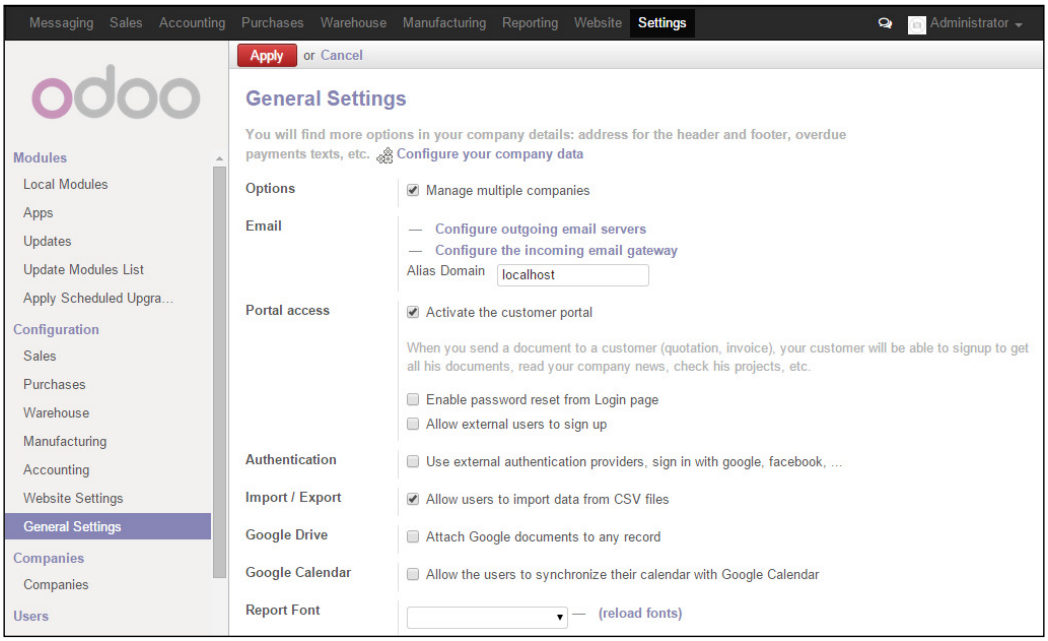


Multiple companies in Odoo

Odoo has the ability to manage multiple companies within the same database. This feature allows you to consolidate some of your system administration and manage operations that are more complex. Multiple-company configuration is an advanced topic. You should be very comfortable with working with single-company configurations before you begin looking into multiple-company configurations. Also, Odoo's warehouse management and analytic accounting abilities are often a more preferable way to manage operations than by configuring multiple companies.

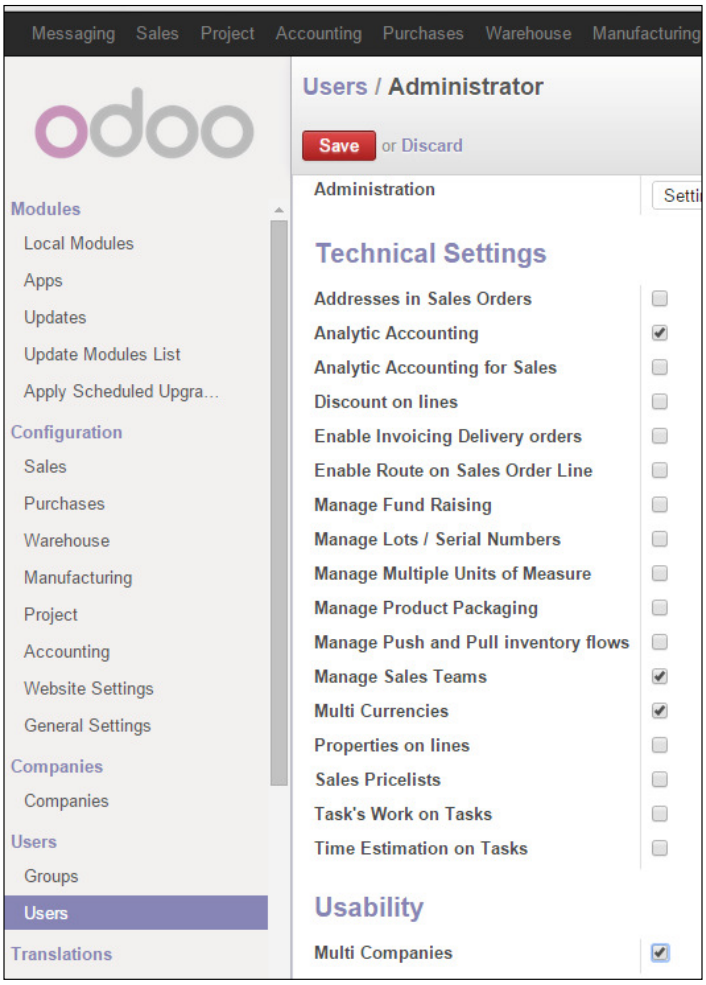
A good general rule is that if they are not separate legal entities, then most likely they should not be set up as multiple companies in Odoo. However, every business requirement is different, and the ability to use multiple companies in Odoo may allow you to easily implement a solution that otherwise may have been rather difficult with just a single company.

To set up Odoo to begin using multiple companies, navigate to the **Settings** menu and under **Configuration**, choose **General Settings**:



After you have checked **Manage multiple companies** and clicked on **Apply**, Odoo will work for a few seconds to configure the installation for multiple companies. Note that this operation can take more than a few seconds on some systems.

First off, by default, Odoo does not turn on multicompany operations for a user even though you have configured multicompany operations through the general settings. Even the administrator user must go in and check the option to **Manage multiple companies**.

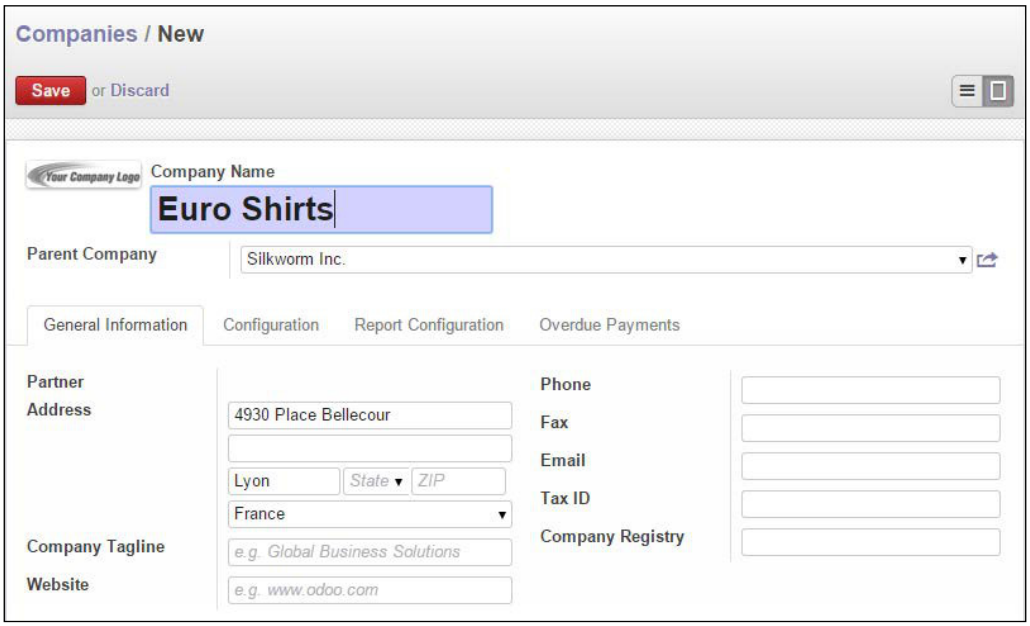


As with other operations that may make major changes to your Odoo installation, use *Shift* + Refresh to tell your browser to reload Odoo completely.

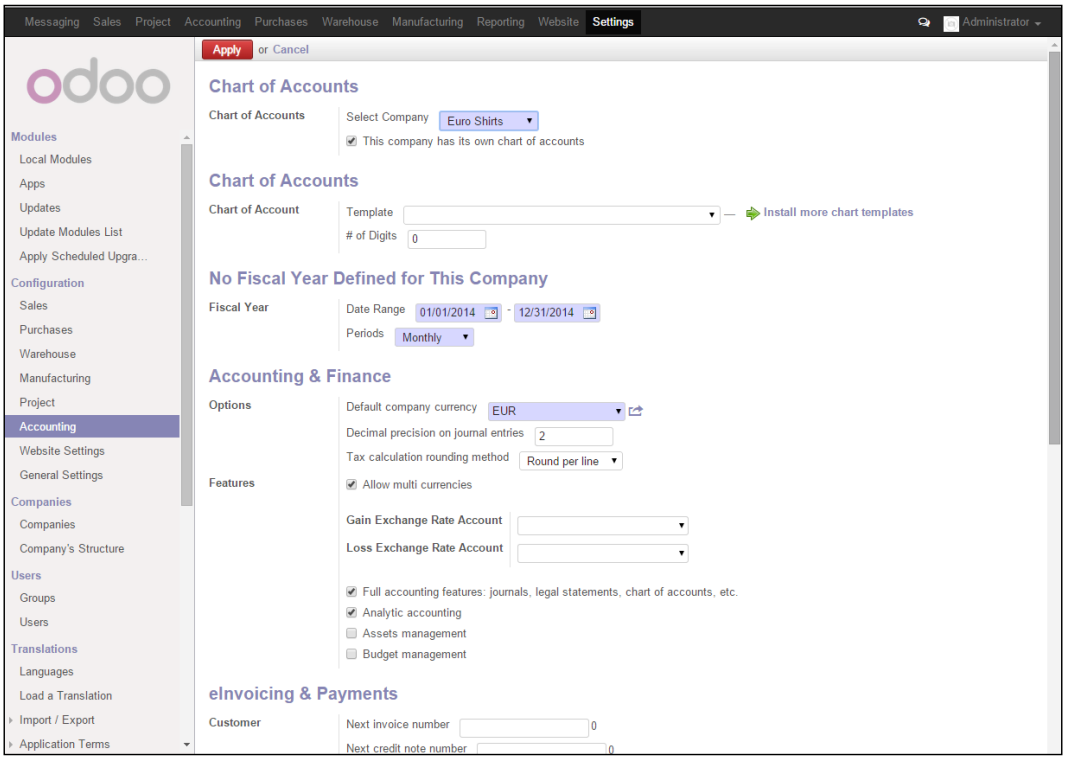
Setting up a second company in Odoo

Now we can create a second company. With Odoo, you can have multiple companies that are all independent of each other, or you can have child companies to which you can link charts of accounts and other operations to roll up into the parent company. For example, we have created a new company named `Euro Shirts` and have set `Silkworm, Inc.` as the parent company.

For our example, we choose **France** and using the Euro as the default currency.



Now that we have defined a second company, we will go into our **Accounting** settings and see how we can define our chart of accounts.



Notice that we now have the opportunity to set up a chart of accounts specifically for our new company along with its fiscal years. Also, take note that at the very top of the form we have specified that **This company has its own chart of accounts**.

Implementing a multicompany solution

As was previously stated, setting up a multicompany system is complex. While the system will work much the same as it did previously, it is important that you understand how a multicompany system affects every operation within the system. Customers, users, suppliers, and the chart of accounts all tie into multiple company operations. This chapter gives you the basics to get started with configuring a multicompany setup, but the final configurations will take a great deal of planning and fine-tuning to have a truly successful installation.

Summary

In this chapter, we examined some of the things you should consider when administering an Odoo installation, such as planning your server configuration and establishing good practices to ensure business continuity in the case of failure. We discovered how to back up and restore databases, as well as how to manage user access and group permissions.

Later in the chapter, we looked at internationalization and configured Odoo to handle multiple languages and international currency. We learned how to change Odoo sequences so your documents can have the formats and numbering that work for your business requirements. Finally, we took a brief look at setting up a multiple company configuration in Odoo.

In the next chapter, we will take a look at Human Resource applications and how you can configure Odoo to make it easier to recruit, interview, hire, and manage employees.

8
Implementing the Human Resources Application

Over the past few decades, companies have had increasing demands placed upon them to keep track of employee-related information. Odoo has a variety of applications that can help your company organize this information regarding your employees. Some of these applications, such as timesheets and attendance records, can become critical processes to help a company control costs. In this chapter, we will look at how you can integrate the Human Resources application.

Specifically, this chapter will cover the following:

- Installation of the Employee Directory
- How to create employees, setup job titles, and enter employee-related information.
- Learn how to create employee timesheets to track time
- Use analytic accounting to track time related to tasks
- Learn about Odoo's recruitment features

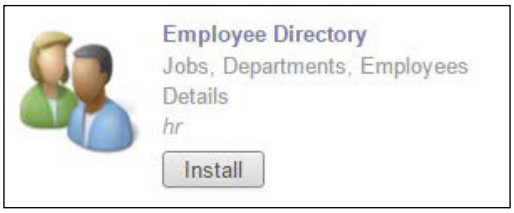
A modular approach to Human Resources

Like the rest of Odoo, the Human Resources application allows you to implement the functionality you need today, and then later, add additional modules. This approach makes it much easier to start using Odoo right away, to solve specific company needs. The best way to be successful with implementing a system is to plan ahead and implement in stages. Once you are successful at putting one application in place, then you can move on to putting additional applications in place.

Installing the Employee Directory

When you install the base Odoo applications, you get the ability to manage system users, but you will notice that there are no menu options for entering and managing employees. To begin working with the Human Resources application, you will need to install the base Employee Directory application.

Go to the **Settings** menu and install the **Employee Directory** application using the same process as the previous Odoo applications.



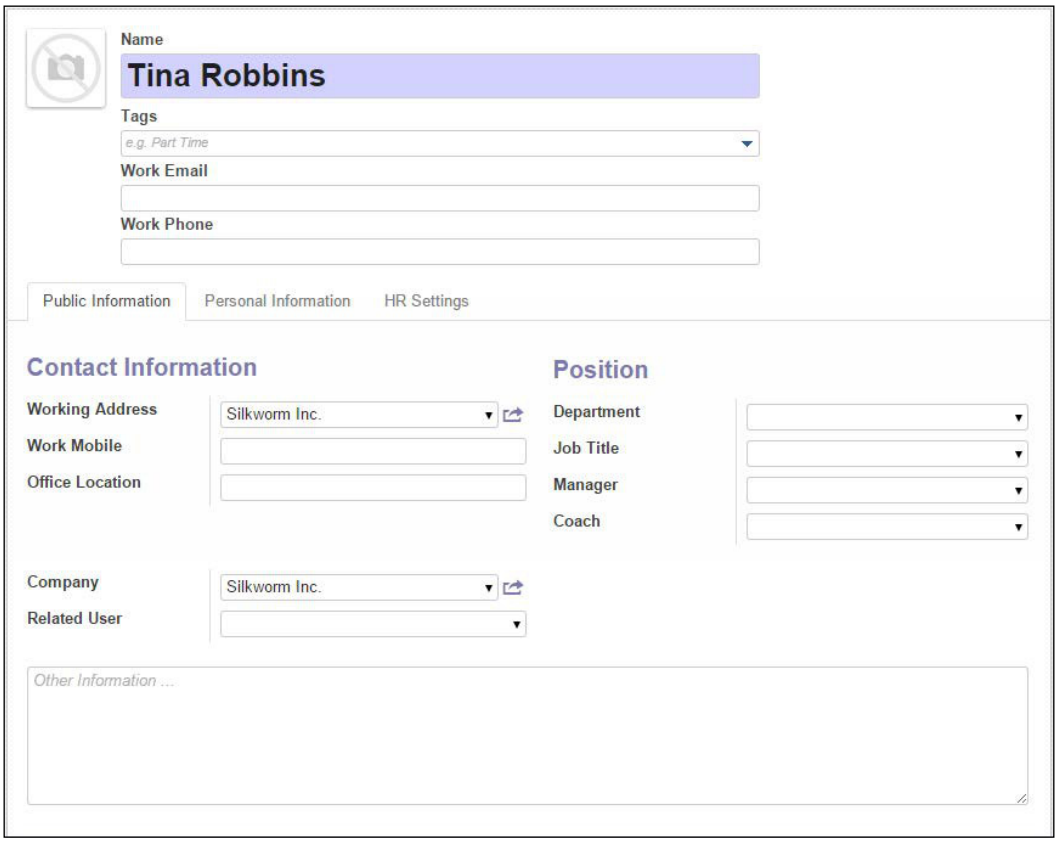
After you have installed the **Employee Directory** application, you will see a new menu at the top, **Human Resources**. Clicking on the menu will take you to the list of employees. The default view for employees in Odoo 8 is the Kanban view:

The Administrator account comes with an image already loaded for the user. So the gentleman you see in the preceding screenshot is likely the same in your Odoo 8 installation.

If you have added users besides the Administrator account, they will be considered employees and included in the list. All users are employees, but not all employees are users.

Creating a new employee

Clicking on the **Create** button will bring up the form for you to begin entering a new employee into Odoo:



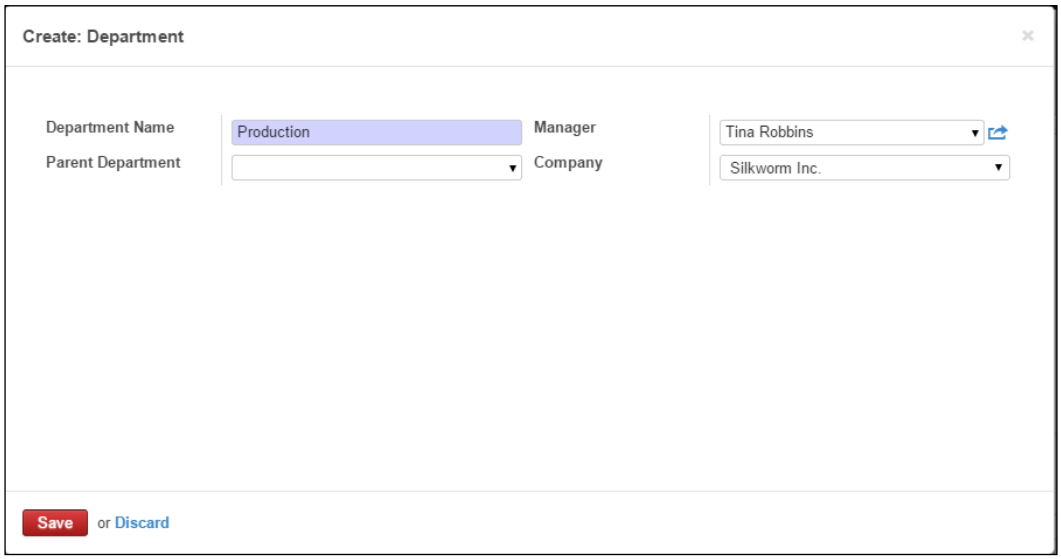
The only required field in the employee form is **Name**. All the other fields are optional. Odoo will default the working address to the company address. While most fields are self-explanatory, we will go over several of the more important fields to take into consideration.

Related User

In the **Contact information** section, the **Related User** field will allow you to associate the employee with an existing user account in Odoo. Simply select the user from the pop-up list and choose which user you want associated with the employee. It is also possible to add users on the fly by choosing **Create…** from the **Related User** dropdown.

Department

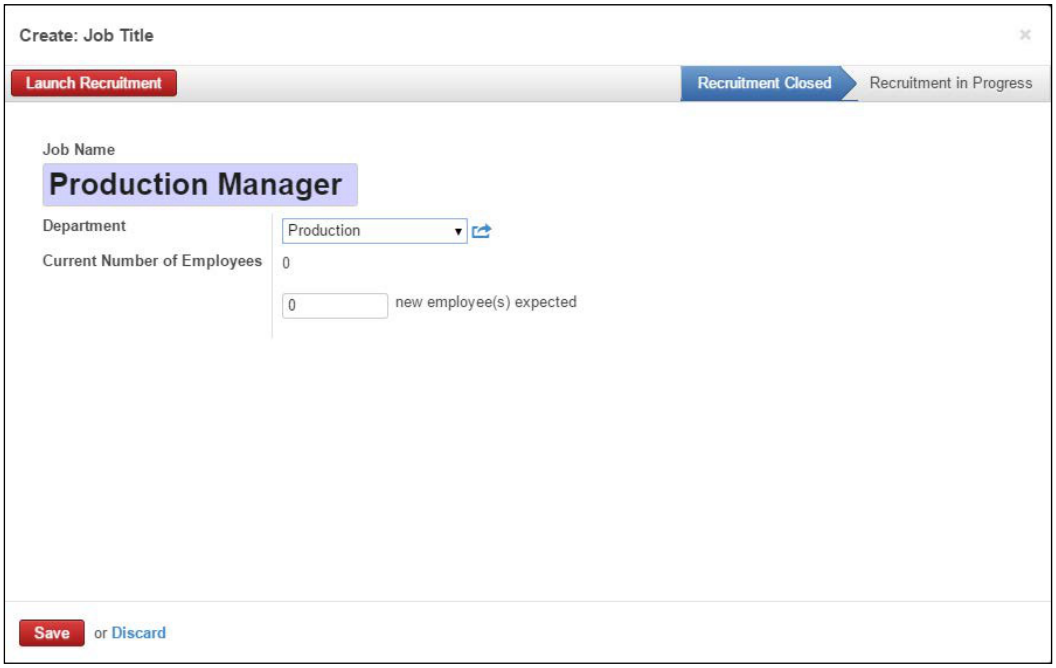
The employee's department is a common way for a company to organize employees. In our example, we are going to create a production department.



In this screen, we have set the **Department Name** field to `Production` and set the **Manager** field of this department to **Tina Robbins**. Also, you will notice that the **Parent Department** field allows you to create a hierarchical structure of departments of your company. Typically, you will wish to look at the organization chart of a company and take some time in preparing the company department structure.

Job Title

The **Job Title** field allows you to manage job titles for employees inside of Odoo.



Here in the preceding screenshot, we created a job title of **Production Manager** for **Tina Robbins**. As you can see from this form, the job titles are tied to departments. This means that to properly configure Odoo, you would need to create job titles across departments. Therefore, you do not necessarily want to simply name a job `manager`. This would make it difficult, when looking at the list of job titles, to know which department that manager is associated with.

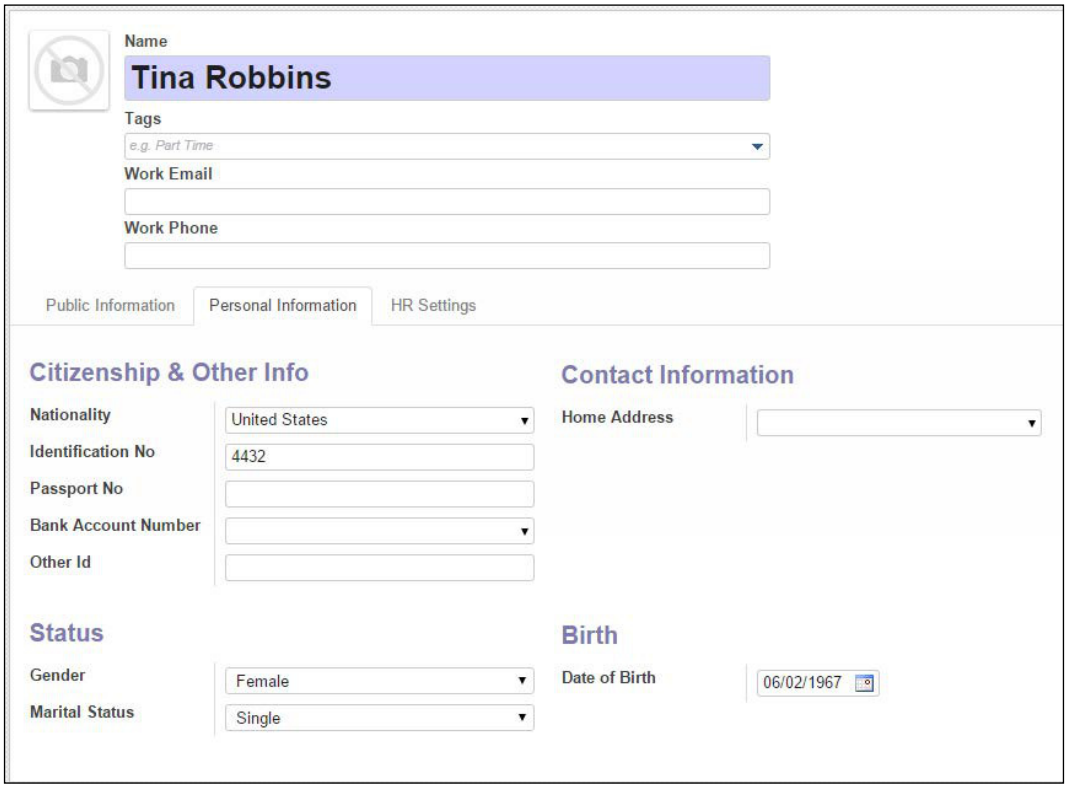
You will notice that there is a count of the current number of employees as well as a place to enter the new employees that are to be expected. At the top, there is a **Launch Recruitment** button, which we will cover later in the chapter.

Manager and Coach

The **Manager** and **Coach** fields on the employee's screen can be used to specify any other employees that are already in Odoo. The manager is often called the supervisor in some companies and might be involved in approving the employee's timesheets, leave requests, performance appraisals, and so on. The **Coach** field is just an optional field that you could use to specify any other relationship the employee has that is valuable to the position.

An employee's personal information

The **Personal Information** tab on the employee's screen contains an individual's private details that are pertinent to the human resources department, such as home address, date of birth, and citizenship status.



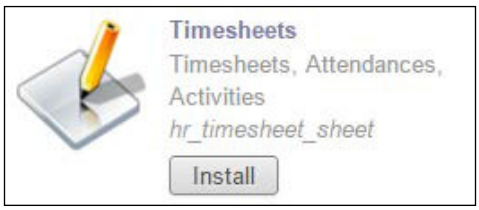
The nationality field allows you to select from the complete list of countries that comes preloaded in Odoo. Typically, the **Identification No** field would be used for an employee badge. Odoo includes a **Passport No** field on the form, which might be required in some cases where a company is required to report citizenship information to the government. The **Other Id** field can be used to collect any other information that might be a part of the human resource record of the employee.

If you decide to enter a home address for the employee, you will be taken to another screen. Near the bottom of the form, you have the ability to specify gender, marital status, and date of birth for the employee.

Under **HR Settings**, the only field on the form after installing the **Employee Directory** field, is a field to determine whether the employee is active. If you wish to make an employee inactive, simply uncheck the **Active** checkbox.

Timesheets

Odoo allows you to install a Human Resource application that will allow you to track employee time and attendance. Timesheets are the most useful feature when you have jobs that require you to account for employees' work hours and assign these hours to projects or customers. To use this feature, install the **Timesheets** application.

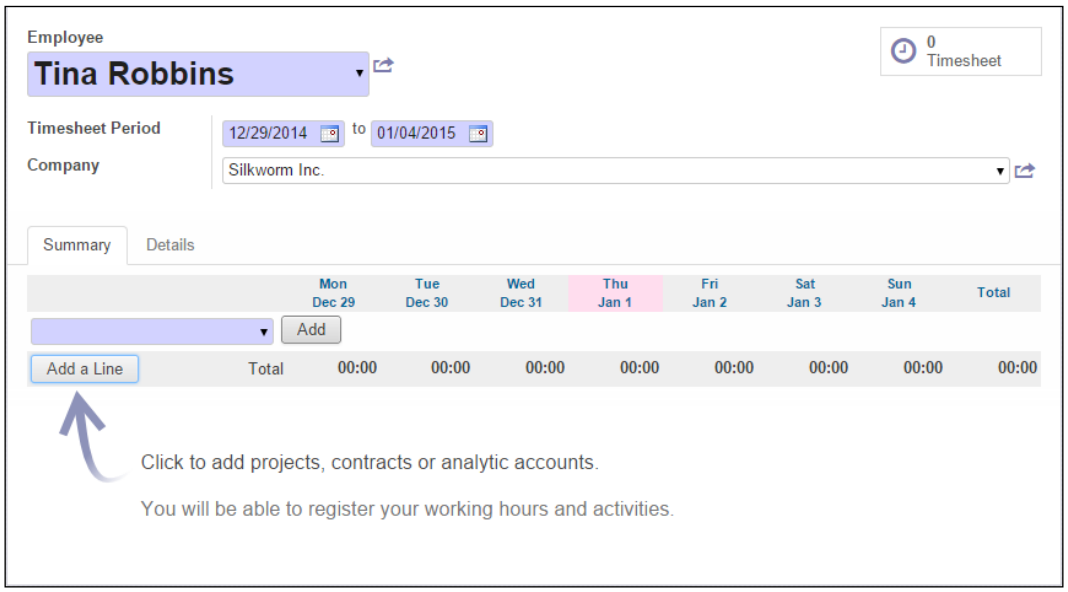


Once you have installed the timesheets application, the **Human Resources** menu will be expanded to include a new section called **Time Tracking**. It is in this section that you'll manage and validate timesheets.

Looking at your current timesheet

We can begin by clicking on **My Current Timesheet** to bring up your timesheet for the current week. If you are logged in as Administrator, you can choose to view any timesheet. In this case, we are viewing the timesheet for **Tina Robbins** and have clicked on the **Add a Line** button to create a new line on the timesheet.

In Odoo, you will need to set up an account to track time and attendance before you can begin entering hours into your timesheet.



An introduction to analytic accounting

When you begin tracking time, it is important for you to consider how you want to report that time spent by employees and whether you would like to tie it to a specific customer. This is where analytic accounting features in Odoo are extremely valuable. In *Chapter 6*, *Configuring Accounting Finance*, you learned how to set up a basic chart of accounts. Analytic Accounting allows you to track finances into alternate accounts to analyze costs and revenue by project, by time period, or by other user-defined analytic operations.

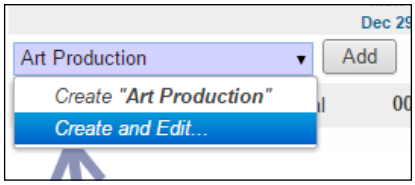
For our real-world example, we are going to set up an analytic account to track our **Art Production** time. When you click on **Add a Line**, you will be prompted to select an account.

An analytical account allows you to track costs and other financial information separately or from a different perspective than your standard accounts. For the most part, it is managers and directors who are going to be interested in analytical accounts as opposed to the financial department who will be focused primarily on general accounts.

After a little bit of configuration in setting up the account, Odoo can take care of the rest once we enter the hours into the timesheets.

Adding a new analytic account to Odoo

To add an account, we use Odoo's ability to add a record on the fly by typing `Art Production` and then selecting **Create and Edit…** from the small drop-down menu:

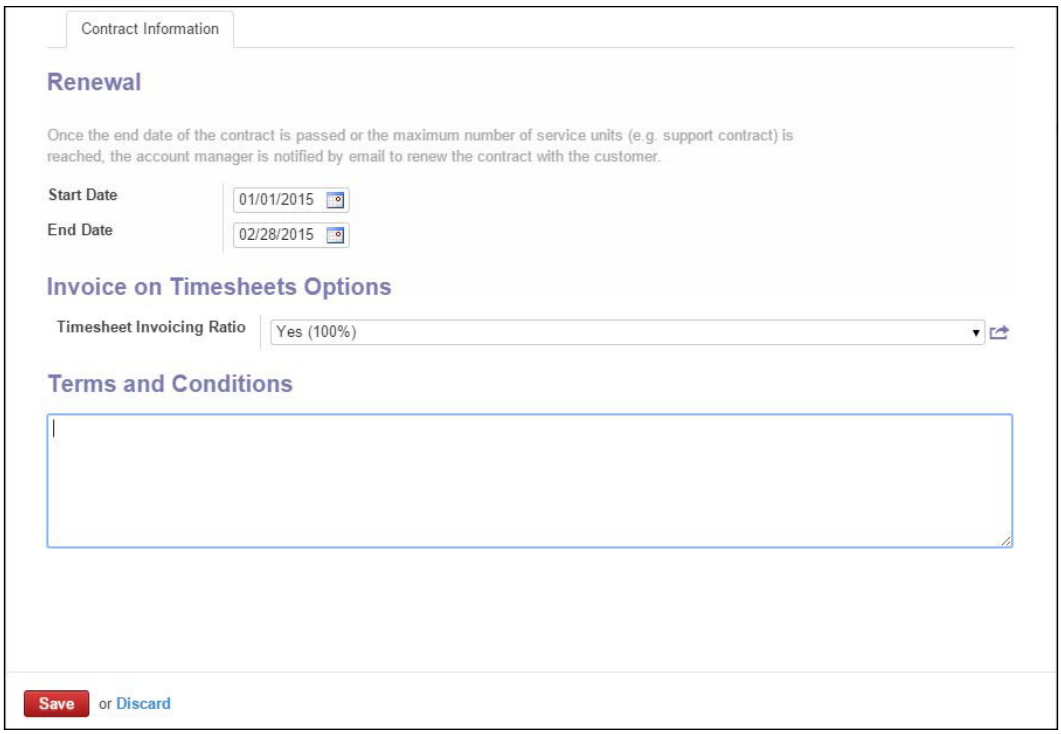


Odoo will then display the form that allows you to specify details for the `Art Production` account:

In the previous screenshot, we set the account name to `Art Production`.

With analytic accounts, you have the ability to tie the accounts to specific customers or account managers. This allows you to perform specific job costing and be very precise about how you track your sales and costs related to tasks within your company. For example, you might have an internal project to renovate the break room. Rather than modifying your chart of accounts to track that one-time project, you can set up an analytic account and use it to track those related expenses. As you can pick the account on any timesheet, you can easily manage how the time is reported.

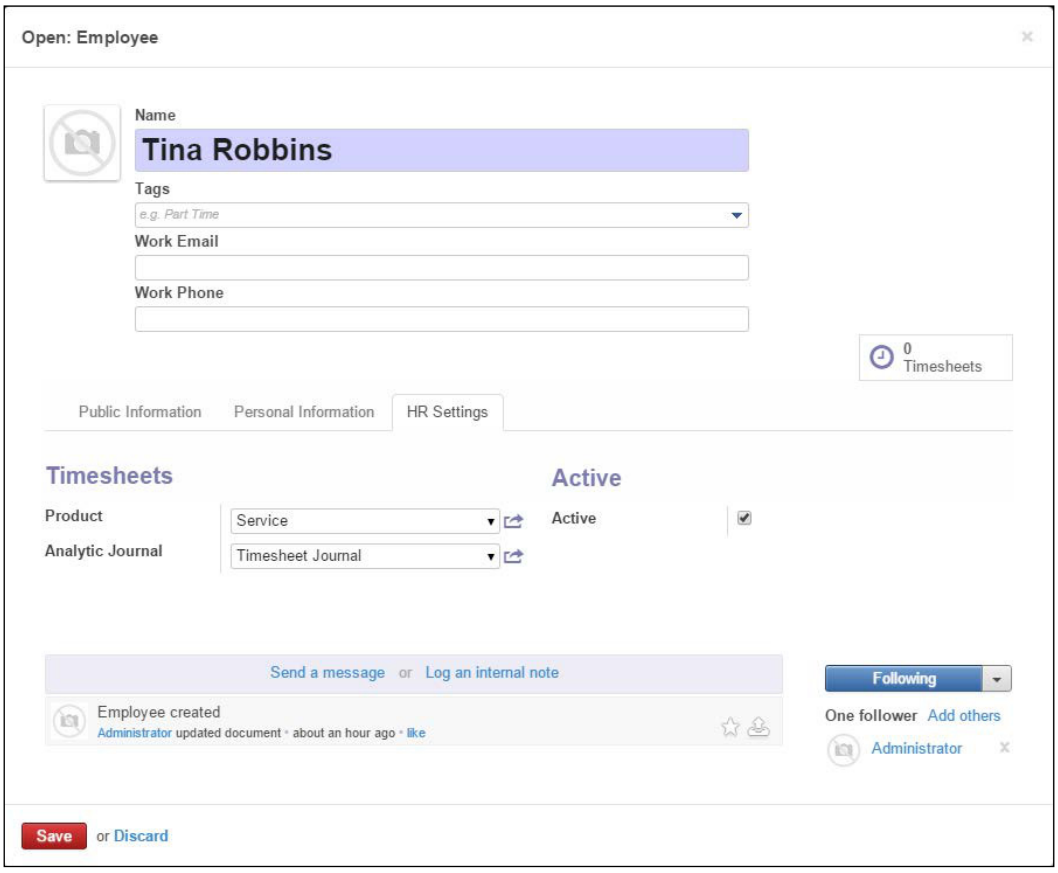
If you want to track projects by contracts or projects there is a **Contact Information** section at the bottom of the form to associate with the time allocated to the account:



Odoo has the capability to specify a start and end date for contracts and automatically notify the account manager when it is time to contact the customer to renew. **Timesheet Invoicing Ratio** lets you specify how much of the invoice is paid up front and how much is paid out during the remaining period of the contract. Use the text area under **Terms and Conditions** to specify any details on the contract requirements.

Configuring the employee to enter timesheets

There is one more step you need to take before you can begin entering timesheets for an employee. When we installed the Timesheets application, additional options were added to the **Human Resources** section of the employee form. An entire new section called **Timesheets** was added with the ability to select a product to associate with the employee's time, as well as an analytic journal that organizes the timesheets.

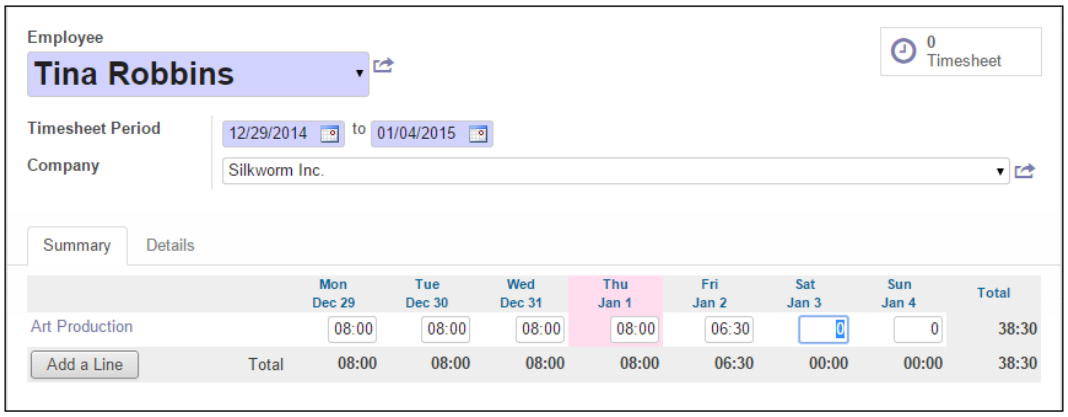


If you do not specify the analytic journal for the employee, you will not be able to create a timesheet and submit it to a manager for approval.

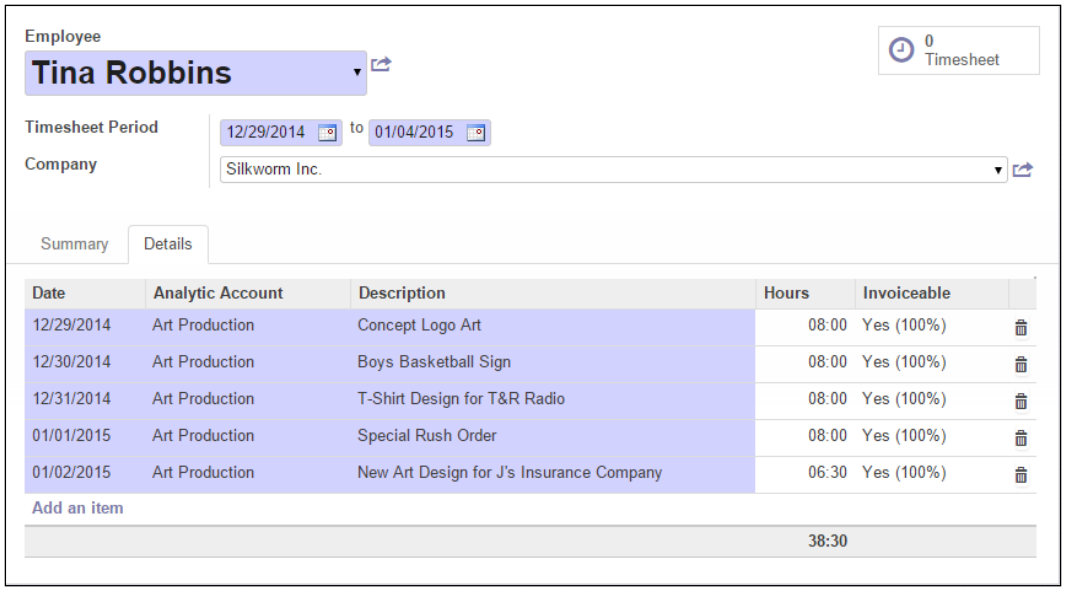
Tracking employee hours with the timesheet

After you have set up the account, you can enter the number of hours into the timesheet. For more complex timesheet requirements, you can create additional accounts and then add as many lines as you need to properly account for all the hours worked.

Here is the timesheet after the week has been filled out for **Tina Robbins**:



You can enter additional details on the work performed by clicking on the **Details** tab:

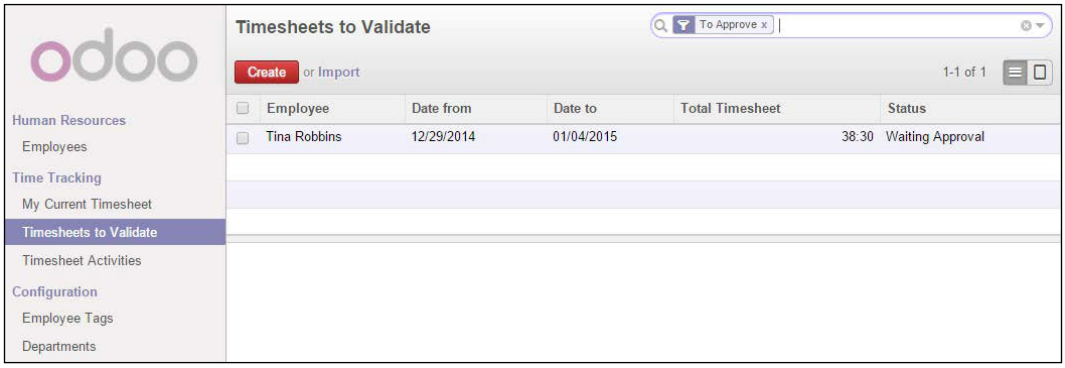


In addition to specifying a description or changing the analytic account the time needs to be attributed to; you can also determine what percentage of the time on the timesheet can be invoiced. This will allow you to manage invoices in which the time performed by the employee, is part of a contract.

After the number of hours is entered, the timesheet can be submitted to the manager by clicking on the **Submit to Manager** button in the top-left corner.

Validating timesheets

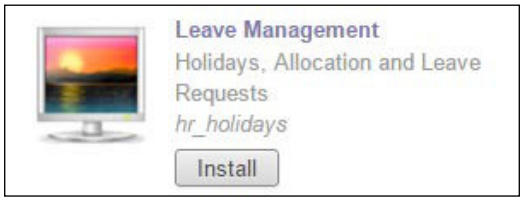
Once a timesheet has been submitted to a manager, the timesheet will appear under the **Timesheets to Validate** section for that manager when they login to Odoo:



To validate a timesheet, simply click on the timesheet you wish to validate, and click on the **Approve** button. If you wish to decline a timesheet, click on the **Refuse** button instead.

Leave Management

In addition to managing and approving daily timesheets, it is also possible to install an Odoo Human Resources application that will manage holidays, leaves, and other information related to employee time off. We install **Leave Management** in the same way as the other Odoo applications.

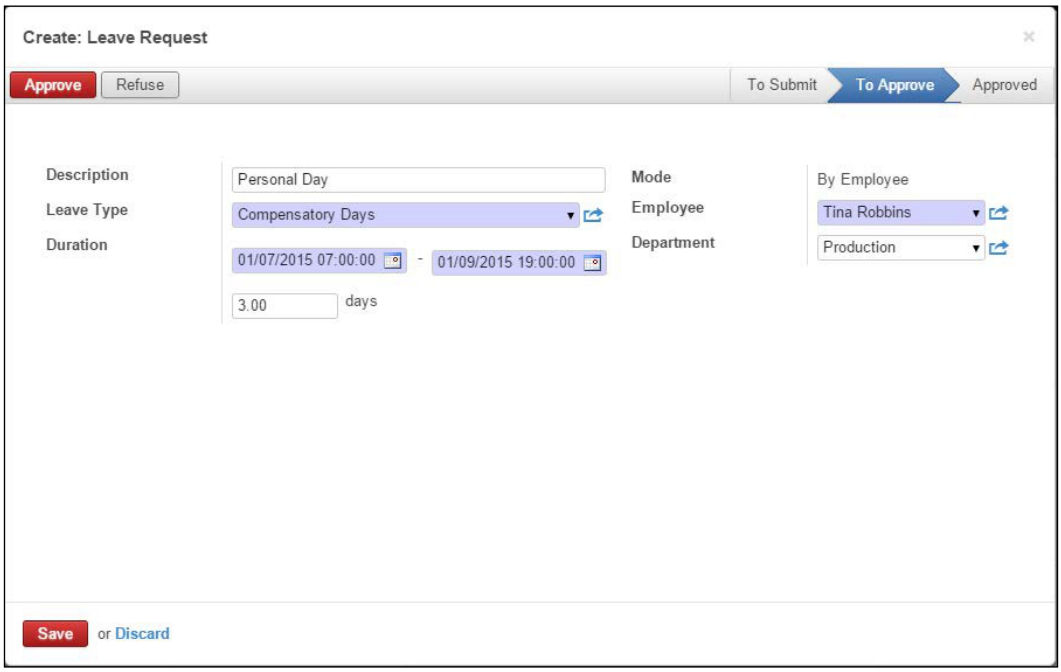


After you have installed the **Leave Management** application, you will have a new section added under the **Human Resource** menu; the **Leaves** section. The primary purpose of this Leave Management application is to provide an easy mechanism for employees to request leave and for their managers to approve or deny the request.

Creating a leave request

When you click on the **Leave Requests** menu option, you are taken to a calendar that will show your current leave requests. Naturally, if there were no prior leave requests made, or there are none for the current month, then the calendar is empty.

Click on a day in the calendar to tell Odoo to schedule a leave request beginning on that day.



In this example, we requested personal time off for a period of three days. Personal days differ from observed or national holidays because they are not taken by everyone in the company, though they are often scheduled around a holiday to maximize consecutive days off.

Leave Type

For our example, we have chosen the **Compensatory Days** leave type. This implies that the employee is taking this leave with pay. Alternative leave types can be managed for reporting purposes.

Duration

When you change the **Duration** field using the date range fields, Odoo will automatically recalculate the **days** field.

Mode

The **Mode** field deserves special explanation and dramatically changes the way in which this leave request is submitted. For our example, we are submitting the leave request for a single employee. By using the **By Employee** tag mode, you can submit leave requests that match all employees who share the same employee tag. This can be useful if you need to schedule leaves for entire sets of employees.

Employee

This field lets you set the employee for whom the leave is requested.

Department

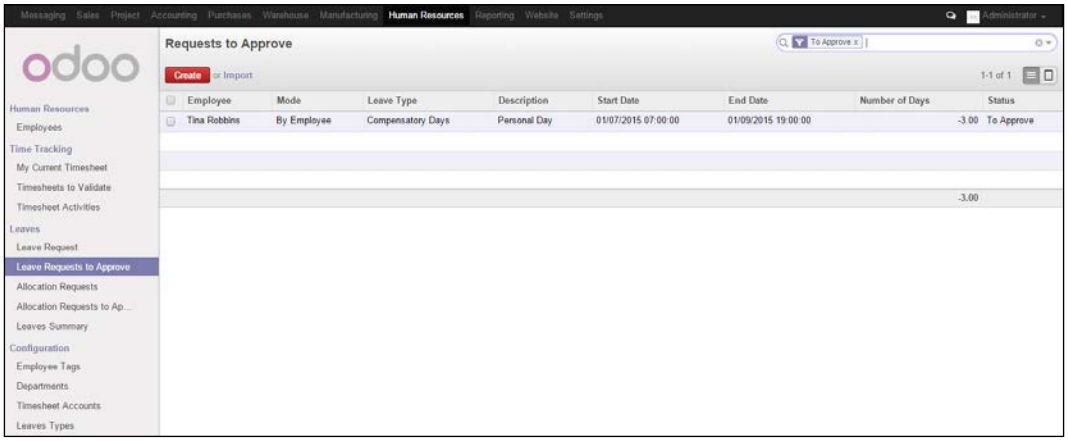
This field lets you set the department for which the leave is requested.

Submitting for approval

When requesting leave, clicking on the **Save** button is all that is required to save the information and send it on to the assigned manager of the employee for approval.

Approving leave requests

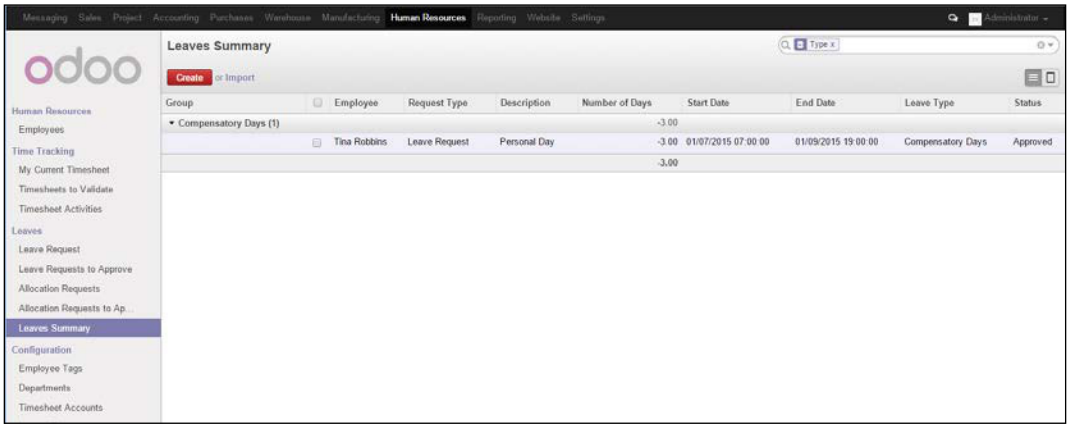
Clicking on the **Leave Requests to Approve** option in the **Leaves** section of the **Human Resources** menu pulls up the list of leave requests for approval. In our example, we can see the leave request we have submitted for Tina Robbins:



Much like the timesheet approval, you can simply click on a request and then choose **Approve** to approve the request, or **Refuse** to deny the request.

Leaves Summary

To see all the leaves that have been approved, click on the **Leaves Summary** option under the **Leaves** section:

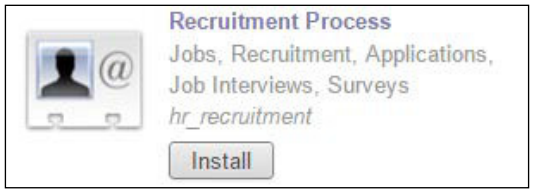


By default, this report groups by the leave type. Using the grouping and filtering options of Odoo, you can configure the leaves summary to display information on the leaves that you require.

Recruitment Process

Many Human Resource departments can spend a great deal of time managing the recruitment process. Odoo provides an application that can help organize the information and make it easier to keep a track of the communication required when hiring new employees.

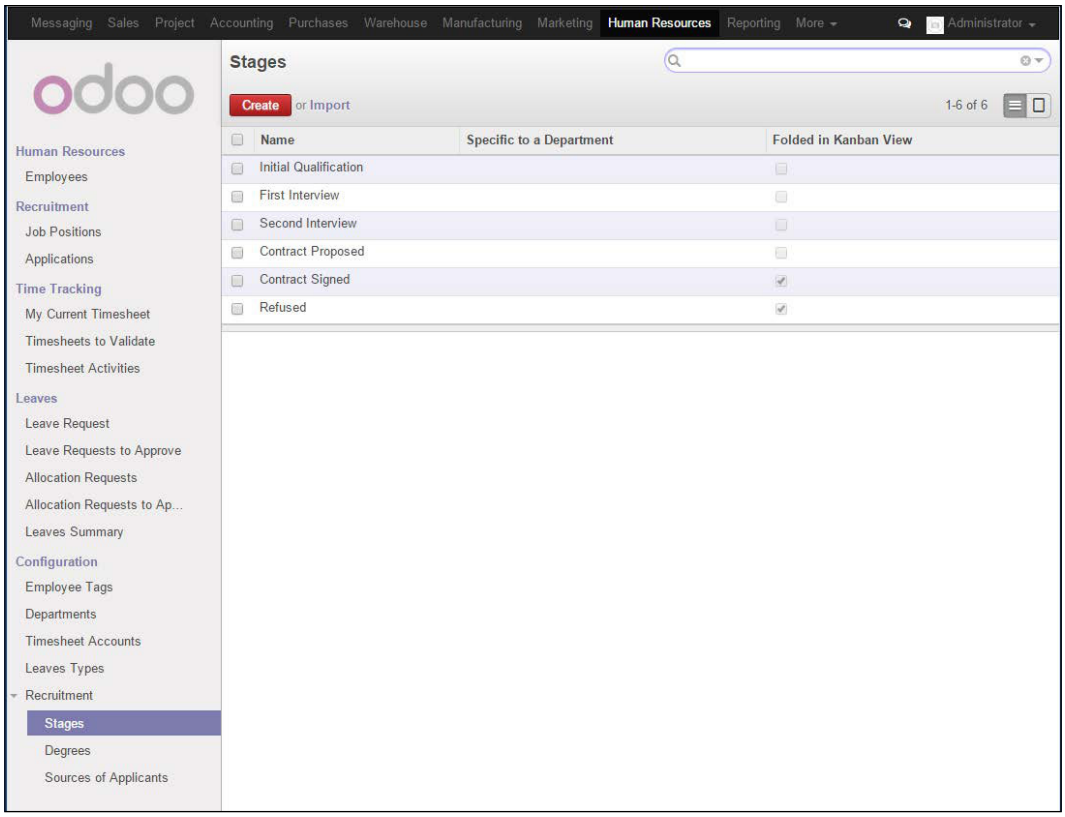
Install the **Recruitment Process** application, as you have installed the other Odoo applications:



After the Recruitment Process application has been installed, Odoo will add an additional section to the **Human Resources** section, as well as new options under the **Configuration** menus at the bottom.

Defining the recruitment stages

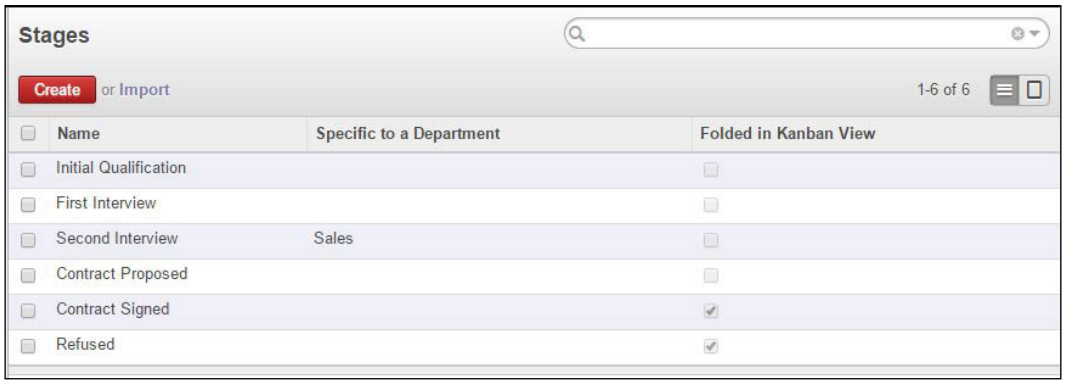
The Odoo Recruitment Process application organizes the recruiting process in stages. This is in much the same way that an opportunity in the CRM application is organized in stages. The goal, of course, is to find new employee leads and then convert them into company employees. To look at the stages that Odoo sets up by default, go down to the **Configuration** section under **Human Resources** and choose **Stages**.



Stages can be created, edited, and deleted just like other records in Odoo. Odoo also allows you to specify that some stages are specific to a given department. Let's implement this in a practical example. In our company, we are going to say that the second interview is only required for the Sales department.

Let's start by adding a new department named `Sales` and restricting the **Second Interview** stage to the **Sales** department.

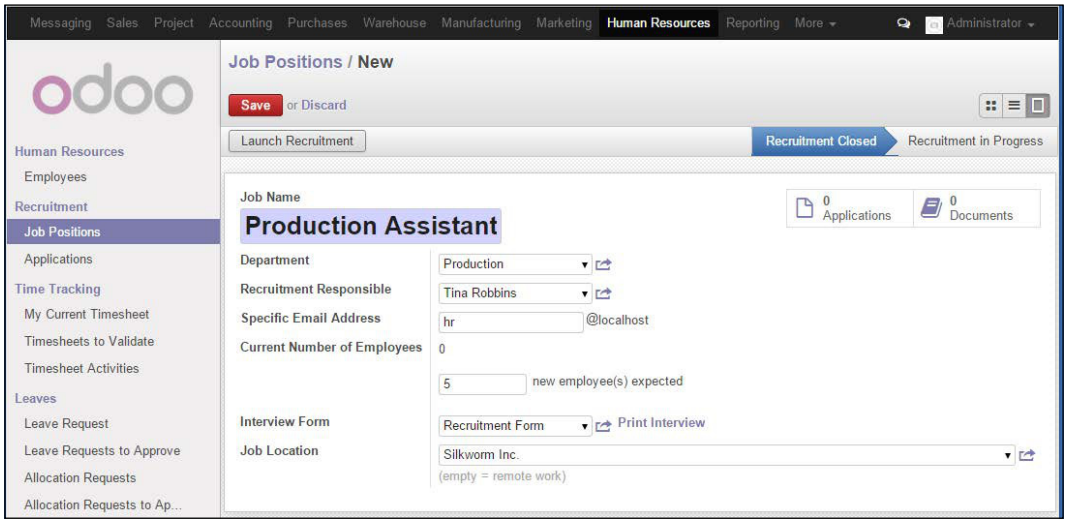
Here are the resulting stages after the previous changes:



Recruiting for a new job

Tina Robbins has been very busy in her position as Production Manager. It has been decided that there is a need to hire a Production Assistant to assist her in her duties. With the new recruitment application installed, we can now create a new job position and start the recruiting process.

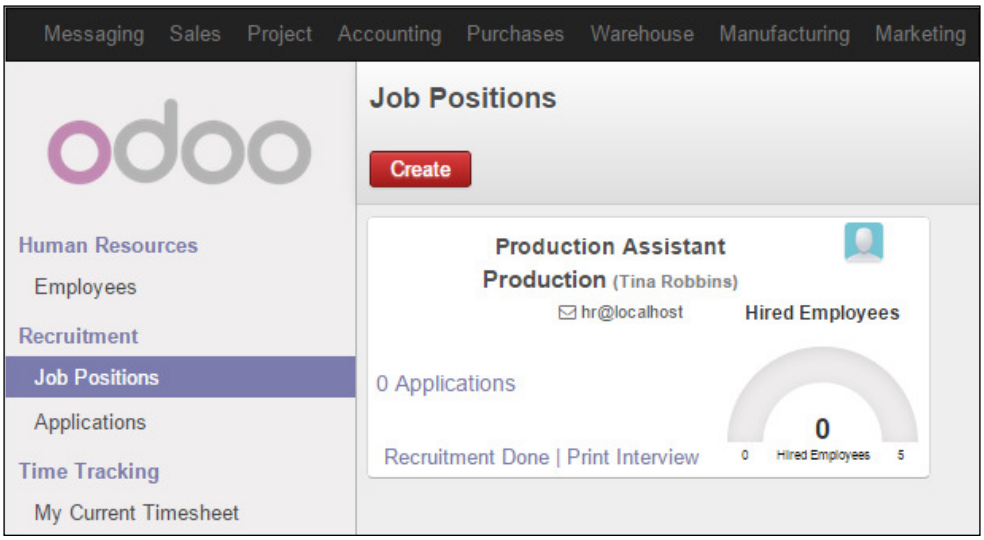
Click on **Job Positions** under the **Human Resources** configuration section, and click on the **Create** button:



Here, we have filled in the details for our **Production Assistant** that has been assigned the position, to the **Production** department.

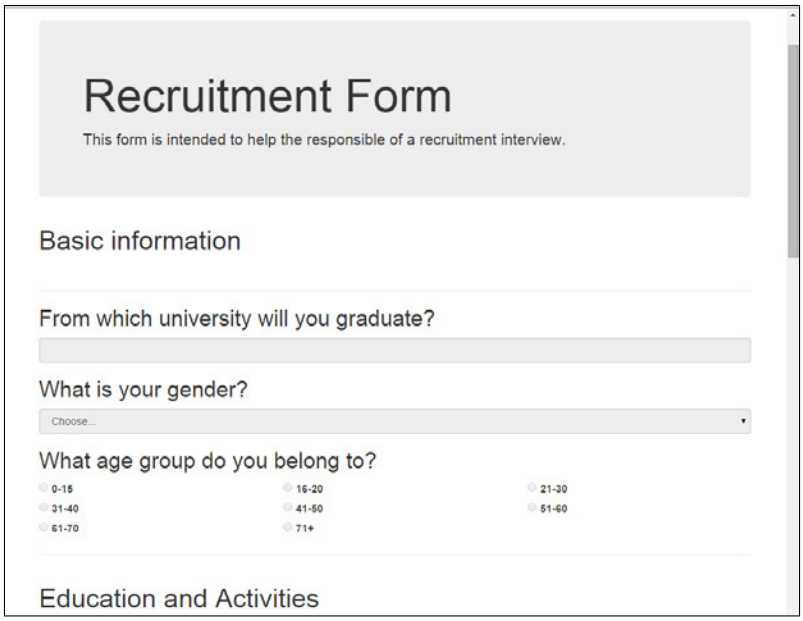
We can now click on **Launch Recruitment** to begin recruiting for this position. This essentially flags the recruiting process as active and makes it easier to determine which positions you are currently hiring for.

When we go back and look at the **Job Positions** section in Odoo, we will find that the Kanban view now displays details about the job position that we created, along with a progress dial that shows our headway toward hiring a total of five employees.



The Print Interview hyperlink

The **Print Interview** hyperlink on the Kanban view allows you to select a PDF job survey file to download. By default, the survey contains generic questions that you would typically ask an employee at a job interview.

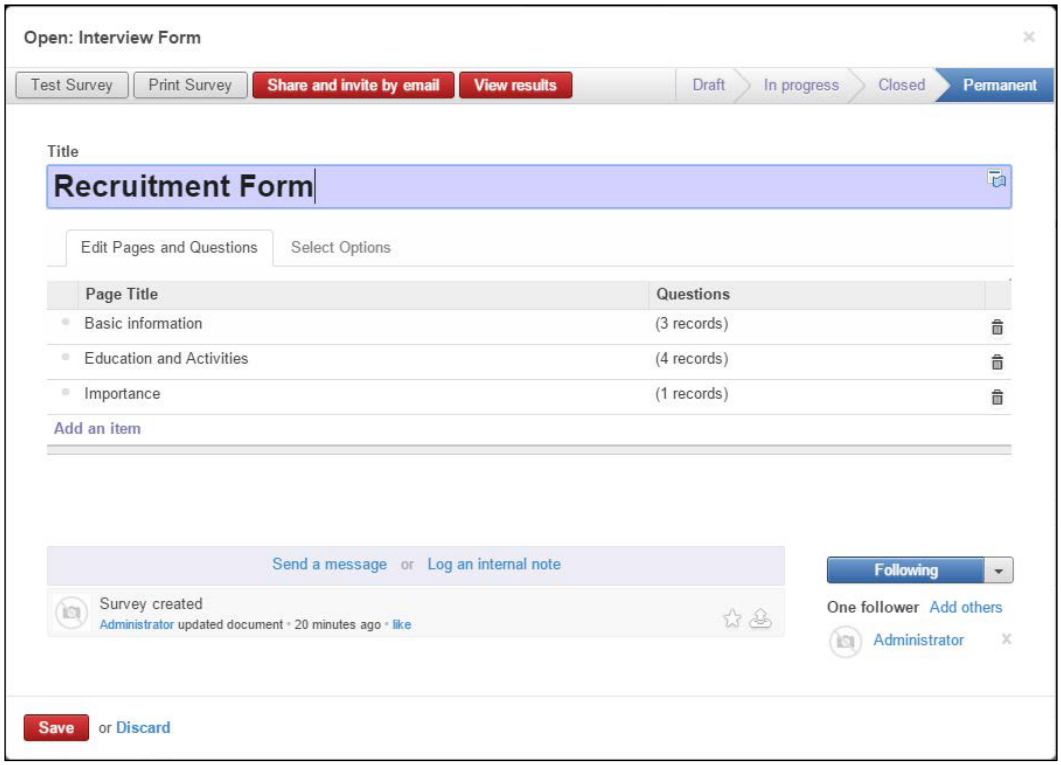


This survey could then be printed and e-mailed or presented to a prospective employee to fill out before an interview. The survey application provides a fairly robust form that you can use to design your own surveys.

You can edit the recruitment form by opening up the job application for the production assistant and clicking on the icon on the right, next to **Recruitment Form**.

After you click on the icon, the survey editor comes up. This allows you to change the interview form to what you want.

At the time of this writing, the terminology used in the Recruitment Form, Interview Form, and Job Survey is a bit confusing. Despite labeling them differently in the system, they are all referring to the same survey document in Odoo.

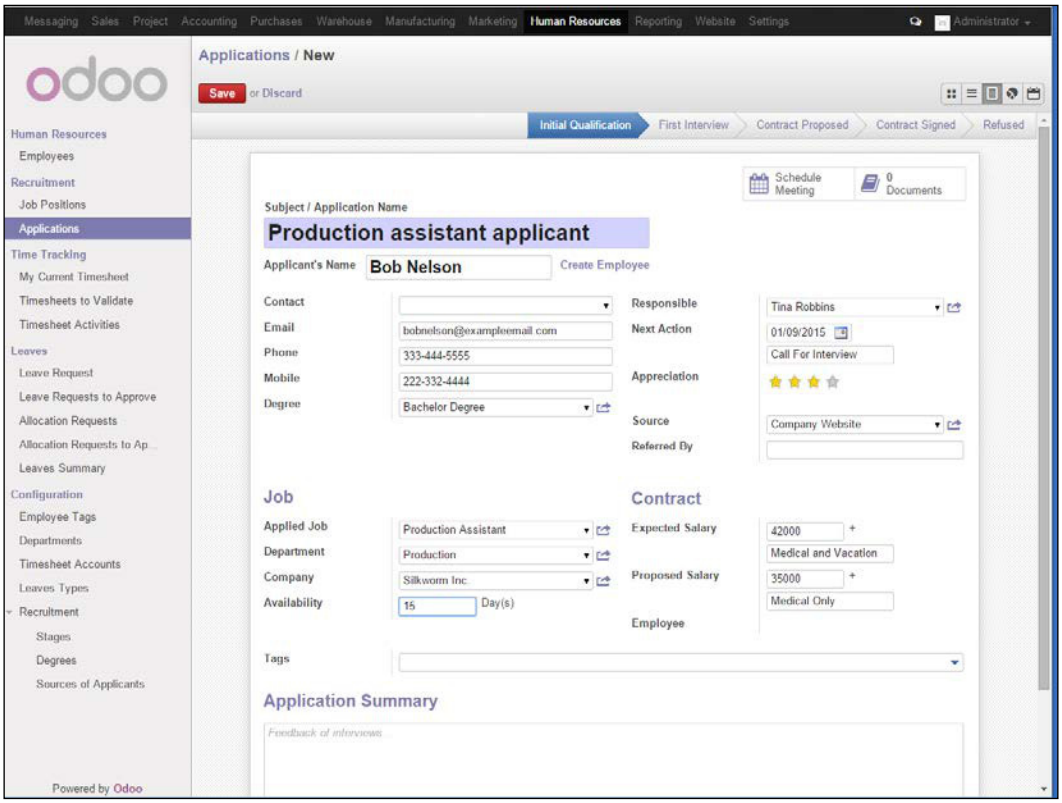


Surveys can be organized around the job function and can be valuable for prescreening employees before a formal interview.

Creating an employment application

When a potential employee sends in an application, resume, or another trigger that allows you to document their interest in working for your company, you create a recruitment application.

Under the **Recruitment | Applications** section, click on **Create** to create a new application:



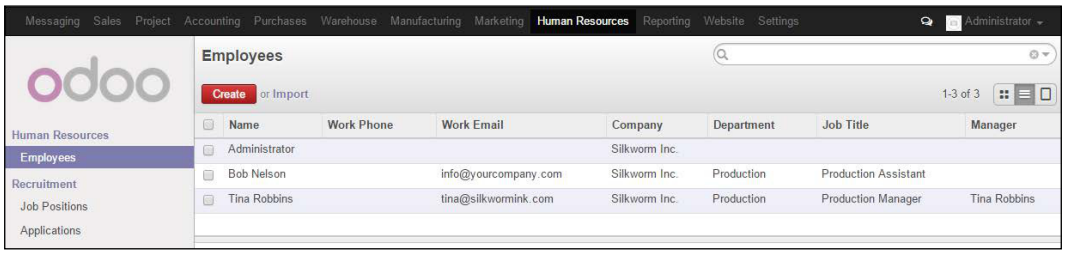
This form has a lot of fields to be potentially filled out. By default, the only required field for the application is the subject. The rest of the information can be collected throughout the recruiting and interviewing processes.

Most of these fields are self-explanatory. Notice that at the top right, you can see the progress of this employee through the various stages.

Hiring employees

Let's go ahead and hire this Bob Nelson guy. Thankfully, the Odoo Recruitment application will create the employee for us by simply clicking on the **Create Employee** hyperlink next to the applicant's name.

Looking at the employees list, we can now see that **Bob Nelson** is an employee in the **Production** department with the title **Production Assistant**:



Summary

In this chapter, we examined the various Human Resource applications available in Odoo. We installed the base Employee Directory followed by applications that managed time and attendance, as well as leave requests. Finally, we installed an application that allowed us to manage the recruiting processes of new employees. We walked through completing an employment application, and finally, turning the potential applicant into an employee.

In the next chapter, we will look at the Project Management application in Odoo and how it can be used to improve service quality for customers. Project Management allows you to organize from the most simple projects, to complex projects involving multiple tasks. Furthermore, you can even track the time related to projects, and display project information in a variety of graphical formats to make it easier to track your deadlines.

9
Understanding Project Management

In this chapter, we will explore a very flexible application that allows you to manage projects and link them into other applications in Odoo. The Project Management application allows your company to manage project stages, assign teams, and even track time and job costs related to projects. Analytical accounting features give you even greater control of how project costs can be linked to your company's general ledger.

This chapter covers the following topics:

- Discovering the various uses for Project Management
- Linking projects with customer accounts
- Assigning teams to projects
- Creating custom project stages
- Adding, assigning, and organizing tasks
- Tying into analytical accounting and employee timesheets

The basics of Project Management

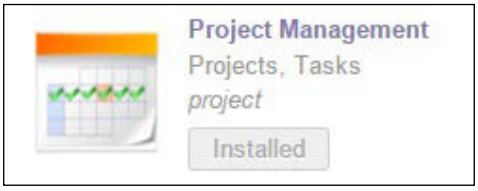
Depending on your industry and the types of projects you may encounter, the **Project Management** application can be set up to manage independent projects, or instead, it can be configured to manage projects related to customers or sales orders. With additional modules, it is possible to link the **Project Management** application into virtually any aspect of Odoo. For example, you could simply use the **Project Management** application to track the various stages and tasks involved in a company event. Who is going to be responsible for finding the location? When will you need to send out invitations? Who is going to set the agenda? When is an employee going to go and pick up the sound system? In this instance, the **Project Management** application is simply being used to track a single project that is not associated with the customer.

In other instances, you might want to use the **Project Management** application to track projects that are organized around your customer records. A common example would be a construction firm. After assigning the project to a customer, you can track various stages of the project's life cycle. Employees can be assigned tasks, and using the Odoo messaging system you can share project details with your customers. It is in this configuration that the Odoo **Project Management** application can add real value to an Odoo installation and provide better integration with your accounting system with less effort than a stand-alone project management tool.

Installing the Project Management application

To access the project managing features, you will need to install the Project Management application.

Go to the **Settings** menu and install the **Project Management** application using the same process as the previous Odoo applications.



The real-world project example

Like in other chapters, we will use a real-world example to demonstrate the functionality of Odoo's **Project Management** application. In the silkscreen industry, it can be common to have extremely large projects that can span across many types of apparel and print designs. For this example, we are going to create a project to manage creating an entire line of sports jerseys for an organization called *Lil League*.

When defining our project, it is important to look at the scope of our project and why it will be valuable to use the project manager to organize the various tasks involved. With our Lil League organization, we are dealing with multiple teams with varied logo designs, the number of players, the sizes of the apparel required, and the printing of different players' numbers and names. There are often multiple deadlines to manage and a number of people that might need to approve various phases of the project as they are completed. Using the **Project Management** application, we can better track this information and tie it into sales orders and other Odoo functions.

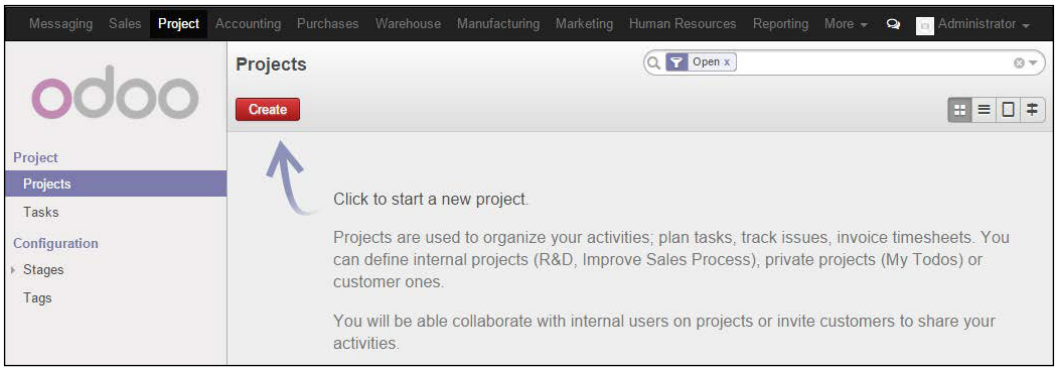
Creating our first project

After the **Project Management** application has been successfully installed, we can go to the Project application and create a new project.

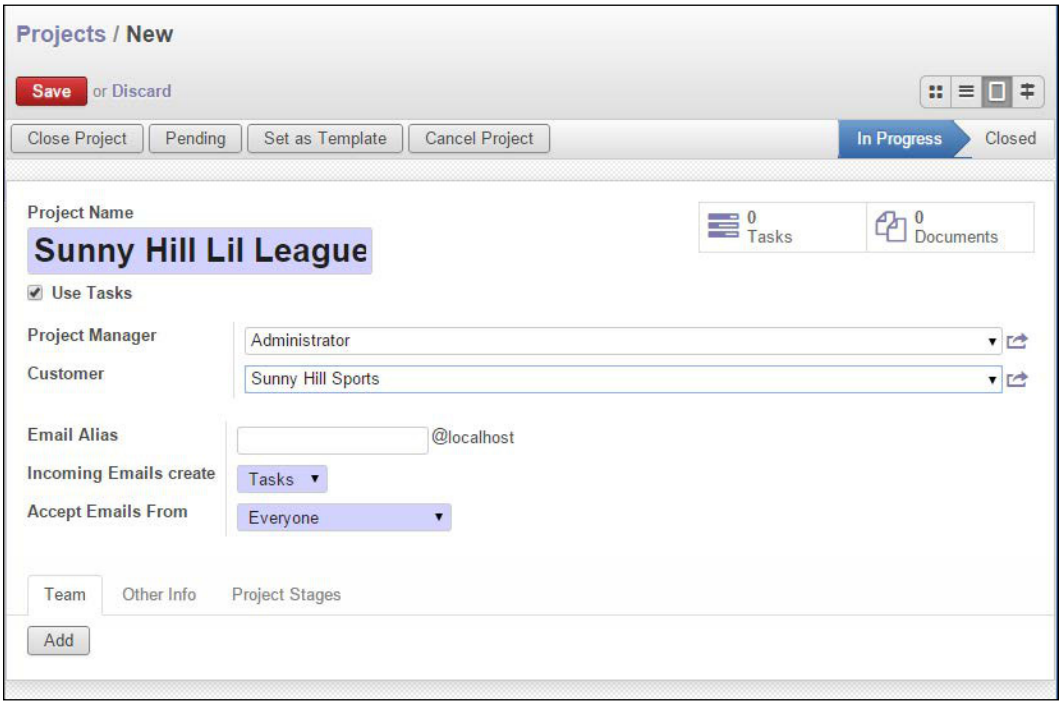
The basic steps we will perform are as follows:

1. Create a new project record
2. Name the project
3. Assign the project to a specific customer
4. Assign team members to the project

To begin with, under the **Project** application, select **Projects** in the menu on the left, and then click on the **Create** button:



After you click on **Create**, the project editor will allow you to enter various details about your new project. For our example, we will start out defining the name of the project, `Sunny Hill Lil League`, and assign the project to a customer that we created, `Sunny Hill Sports`. Assigning a customer is optional, but in this example, we are identifying the customer as the primary league contact.



You will notice that the project is set to **In Progress** in the top-right corner. You will also notice that you can assign someone as **Project Manager** as well, though this is not required.

If the **Use Tasks** checkbox is checked, then you will see the **Project Stages** tab in the form. Different projects can naturally have different project stages that they go through on their way toward completion. For our example, we will leave the **Use Tasks** checkbox checked. A little later, we will go through how to define the various stages for our project.

Assigning project teams

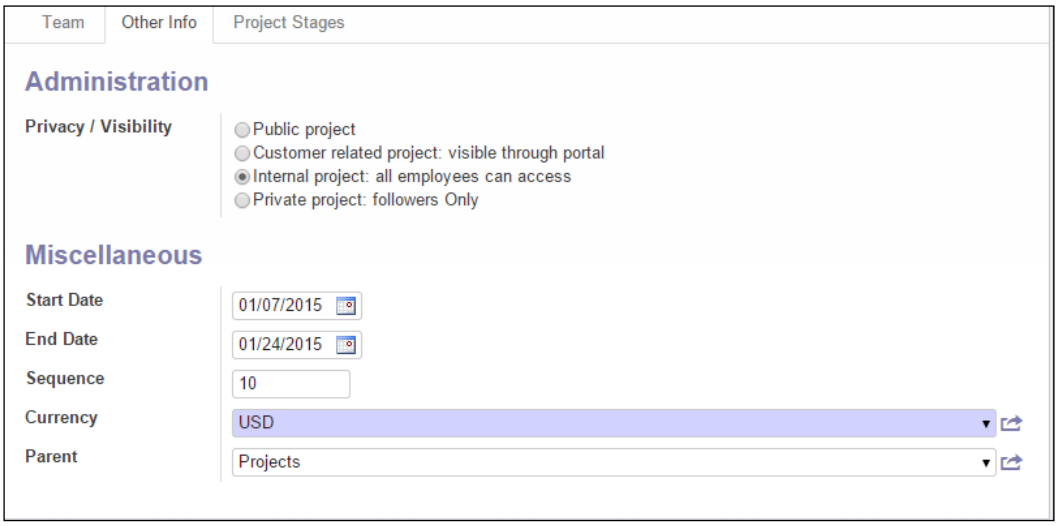
In the first tab that is labeled **Team**, you can add team members to the project. Click on the **Add** button, and you will be provided with a list of the available team members in your company. To filter the list or to locate a particular employee by name, simply type it into the box in the upper-right corner.

Using the checkboxes to the left of a person's name, you can add multiple project members to the project team at the same time. To mark everyone who is included in the list, use the checkbox at the very top in the header row.

After you have selected all of the **Project Members** options you want to add, click on the **Select** button to add them to the project team. Next to each member on the project team in the project edit screen you will see a small **x**. Clicking on this **x** will remove that team member from the project.

Setting other project information

In the second **Other Info** tab, we can record additional information related to the project. We can adjust privacy settings for the project, provide a start date and an end date for the project, currency, as well as determine sequence settings. Finally, you can specify a parent for the project so that you can nest projects inside of other projects to provide more flexibility in managing extremely complex projects.



Under the **Administration** heading, we see that we can define **Privacy / Visibility** settings for our project. Now with Odoo 8, you have the ability to define the visibility four separate ways:

- **Public project**: This option allows you to make a project completely public so that someone can access it without having any login in Odoo.
- **Customer related project: visible through portal**: This option will allow the customer assigned to the project to access the project. To facilitate this, Odoo will send a link to the customer so they can login to the portal and see the project.
- **Internal project: all employees can access**: This option is the default setting. It restricts project access to internal employees. This option, however, allows all employees in the company access to the project.
- **Private project: followers Only**: This option is the most restrictive project. With this setting, only the followers specifically assigned to the project are allowed access.

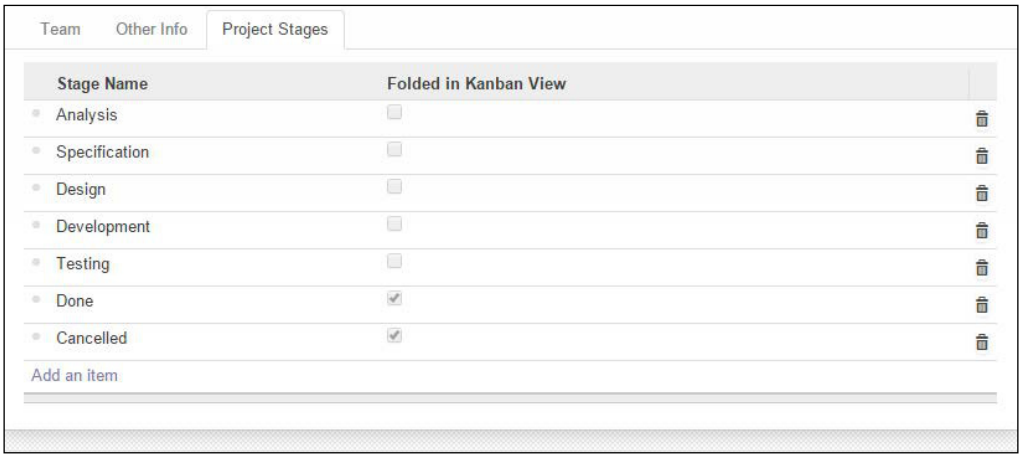
As we can rearrange projects into any order we want within the Kanban view, Odoo provides a **Sequence** number to determine the exact order of the projects. If you have multicurrency turned on, you will also have the opportunity to provide the currency related to the project. This will be used when calculating budgets and other expenses related to the project.

The **Parent** field provides the capability to nest multiple projects inside another project. If, for example, we wanted to treat each Lil League team as a separate project, we can group them under this project using the **Parent** field in this form. In this way, an entire smaller project can itself become a mere step (or **Task)** along the way to completing the larger, more complex **Parent** project. We can examine all projects in Odoo as they are ultimately contained in the **Projects** collection.

Understanding project stages

In the third tab, we can define the stages for the project. This tab will only be available if the **Tasks** checkbox in the upper-left corner is checked.

The **Project Management** application has a set of default project stages that will be automatically populated when you create a new project. You can then add, edit, and delete **Project Stages** as required, to meet the needs of each specific project.



In the **Project Stages** tab, you have both the **Stage Name** option and the option to fold that status in the Kanban view.

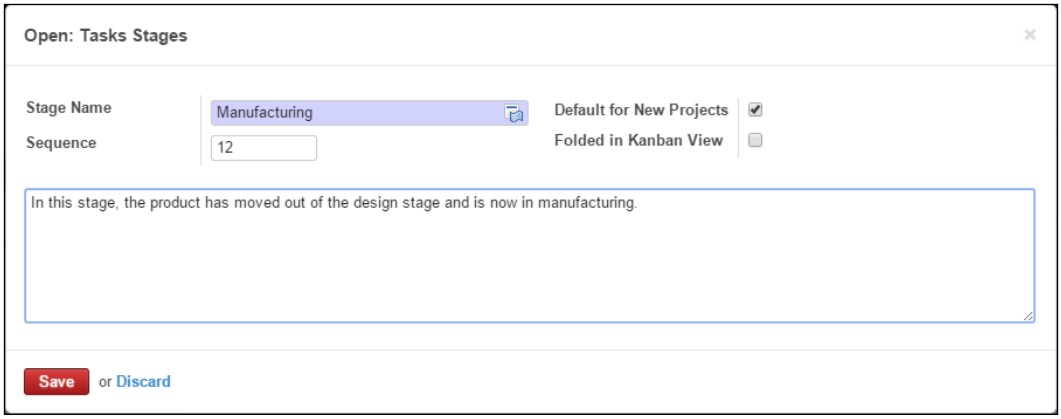
In Odoo 8, the stages inside the Project Management and the CRM applications were simplified by removing a field named `related status`, which corresponded to the stage name.

Defining project stages for a specific project

For the purpose of our example, there are several changes we would like to make to our **Project Stages**. While **Specification** and **Design** are very appropriate stages for our real-world example project of printing team jerseys, the stages of **Development** and **Testing** could be much better defined. Instead of **Development**, the stage could better be described perhaps as **Manufacturing**. Instead of **Testing**, the stage could better be described as **Quality Assurance**.

While the stages we might want to change will depend on the project, for the silkscreen printing industry, we can anticipate that we will most often wish to use these new definitions for nearly *every* project. Let's redefine them once, so that the new stage descriptions can be used in all future projects.

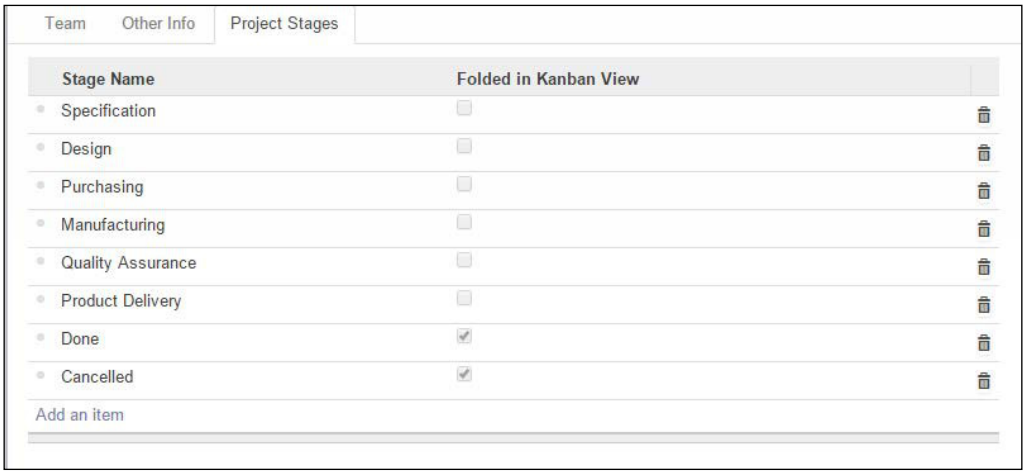
To edit **Project Stage**, simply click on the row you want to change. In this case, we will begin by changing the name of the **Development** stage.



In this example, we have simply changed the stage name from **Development** to **Manufacturing**, which better describes the stage for our project. We have also kept the **Default for New Projects** checkbox marked because we can anticipate that most of the projects for this company will involve manufacturing. If needed, the **Sequence** option could be changed here to reorder the stages of the project.

The **Folded by Default** checkbox tells Odoo how to handle stages that have no tasks assigned to them in the project view. If the **Folded in Kanban View** checkbox is checked, then the Kanban view will make this stage invisible when there are no tasks. If the checkbox is not marked, Odoo will show the stage in the Kanban view even if there are no tasks currently assigned to this stage. We will keep this checkbox unmarked.

The following screenshot has the new stage list after it has been modified with stage names more appropriate to the Lil League project for our example:



In addition to changing **Development** to **Manufacturing** and **Testing** to **Quality Assurance**, we have also added stages for **Purchasing** and **Product Delivery**. Finally, we have removed **Analysis** from the list of stages.

The little bullet to the left of the **Stage Name** option will allow you to drag and drop stages to reorder them in the list; this is much quicker than editing the **Sequence** field of each stage. Clicking on the little trash can icon on the far right of the row will remove a stage from the list.

With these stages in place, we can now assign tasks that will help us manage the project through the various stages.

Now with our project stages defined, we can begin defining tasks for our project.

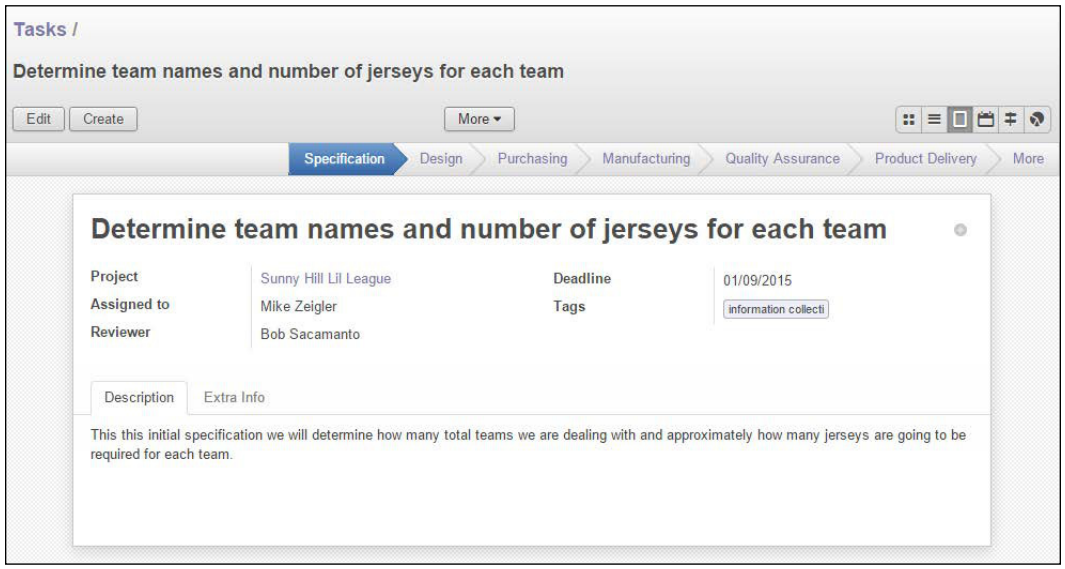
Defining project tasks

The main unit for tracking the various activities involved with a project is a project task. We will create a new task by navigating to the **Task** menu in the **Project** application and clicking on the **Create** button. Here, we'll define the various aspects of the task:

- the name of the task (this is required)
- The stage to which the task belongs (also required)
- The project to which the task is assigned

- The deadline date of the task
- The responsible party assigned to the task
- Any tags you would like to associate with this task
- A description of the task

For our example, we have filled out the task as seen in the following screenshot:



At the top of the form, you will see all of the project stages and the current stage highlighted in blue. In this example, **Specification** is the currently selected stage. When in the edit mode, you can click on these stages to directly assign the task to a given stage. This can be changed as the project progresses, so you are not locked into keeping a task assigned to the same stage throughout the project.

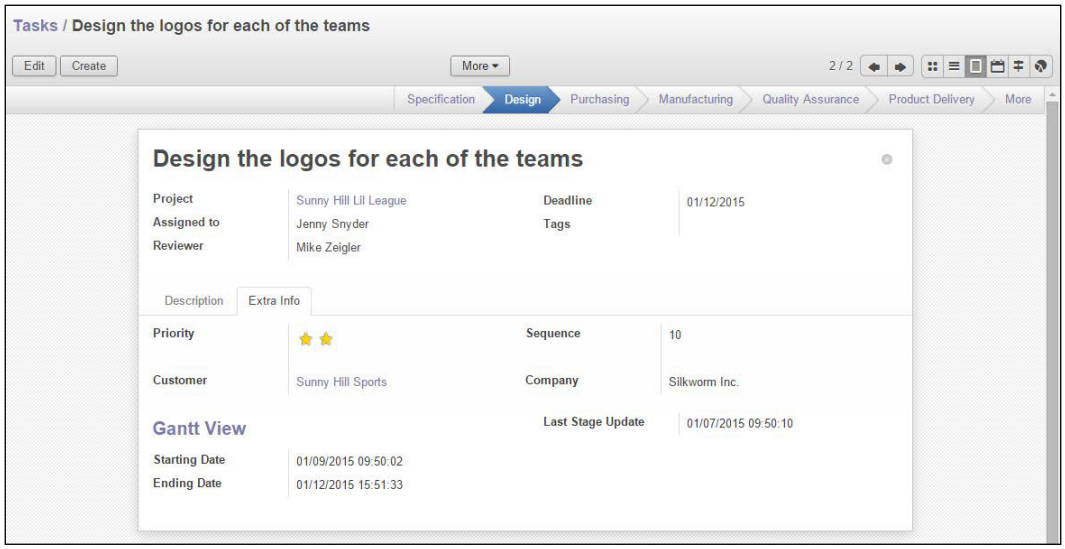
One of the important aspects of good project management is assigning responsible parties for each and every task. The **Assigned to** field allows you to specify who is ultimately responsible for the completion of the task. Odoo also allows you to optionally specify someone's name in the **Reviewer** field to check that the task has been completed and has met the necessary requirements.

The **Tags** field can be valuable to better track and organize tasks. In our example, we have defined an **information collection** tag. This tag can then be assigned to any task that is related to collecting data regarding the project.

Defining additional task information

The **Project Management** application also allows you to define additional information for project tasks. This information includes:

- **Priority** of the task
- **Sequence**
- **Customer**
- **Starting Date** and **Ending Date** in **Gantt View**



In our example, we have used the same customer throughout the entire project. For complex projects, you might have several customers that are part of various tasks in the project.

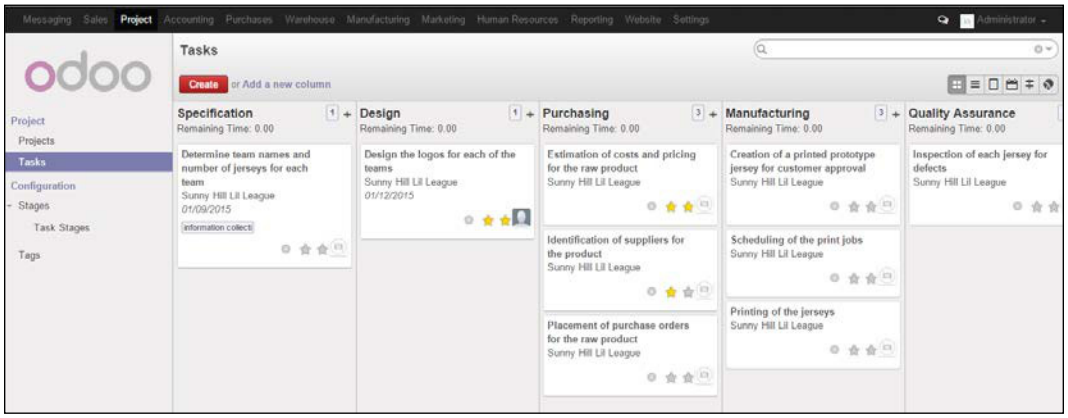
Creating additional tasks

For our real-world example, we are going to define several tasks at various stages. These tasks include:

- Approval of the logo designs
- Collection of the names and numbers of the players on each team
- Identification of suppliers for the product
- Estimation of costs and pricing for the raw product

- Placement of purchase orders for the raw product
- Creation of a printed prototype jersey for customer approval
- Scheduling of the print jobs
- Printing of the jerseys
- Inspection of each jersey for defects
- Packaging and shipment of the jerseys

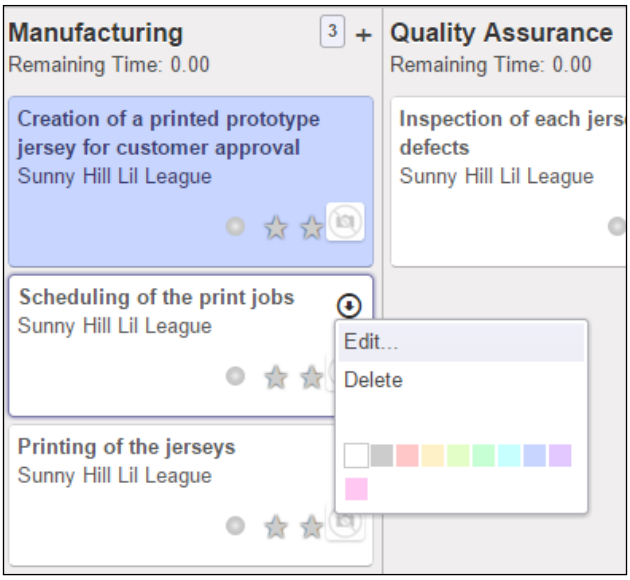
After entering our tasks and assigning them to the various stages, we can look at tasks, more easily, in the Kanban view. In this view, you can drag and drop tasks to move them to different stages and reorder the sequence of tasks.



Each task is represented as a card and provides the name of the task, the project, and the due date for the task. Tags such as **information collection**, are also displayed on the card.

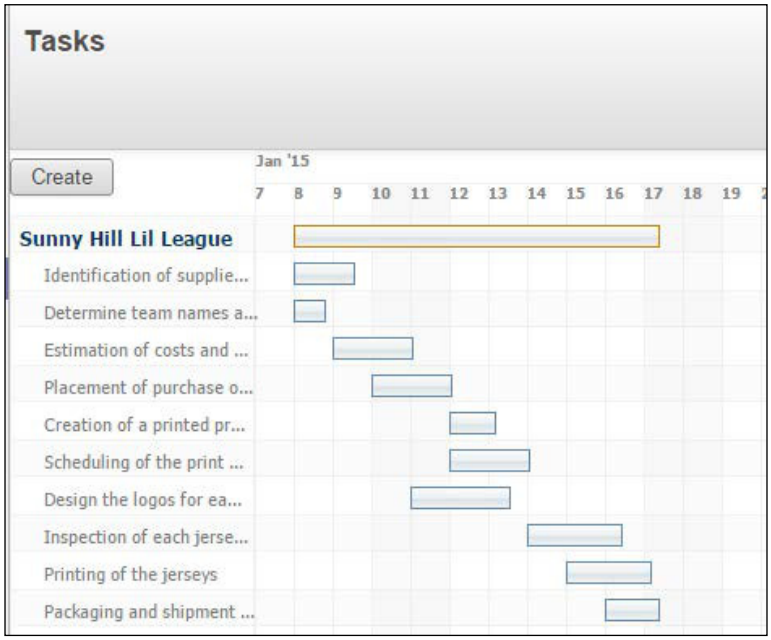
If you hover over the little icon shaped like a head, you will see the name of the person who is assigned to the task and who is, therefore, responsible for it.

The small arrow in the upper-right corner of each Kanban card will bring up a popup menu that will allow you to specify the color of the card to visually organize your tasks, as well as an option to edit or delete the task.



The preceding screenshot shows you how to change the color of the Kanban card by clicking on an available color from the palette.

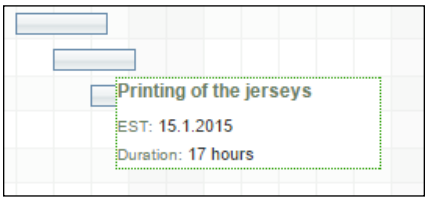
You might also want to see the tasks in both a list view and a Gantt chart view. The icon for the Gantt chart view looks like this: ╪.



The tasks are shown in a Gantt chart view format in the preceding screenshot.

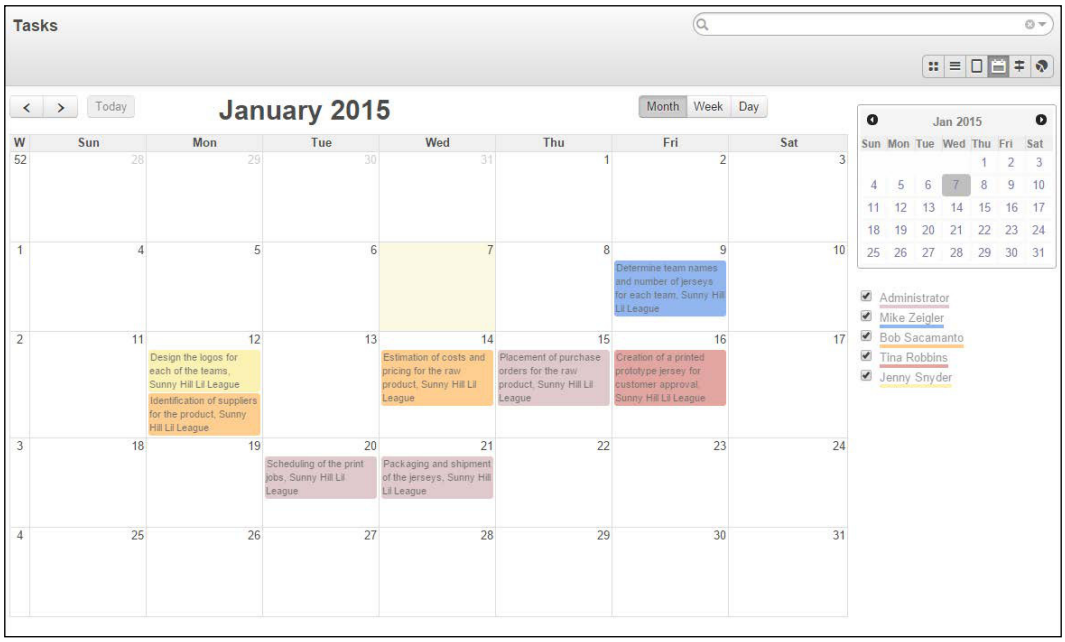
Using this view, you can adjust the time of a given task by clicking on and dragging the edges of the task bar. You can also click at the center of a bar and drag a task left or right to reposition it in the Gantt chart view. You cannot, however, drag tasks up or down to reorder them.

If you move your mouse over a task and hover there, you will see a small pop-up box providing you with additional information about the task. This is demonstrated in the following screenshot:



Don't waste your time trying to double-click or right-click on a task on the Gantt view. Unfortunately, Odoo does not provide a direct way to edit tasks from the Gantt view.

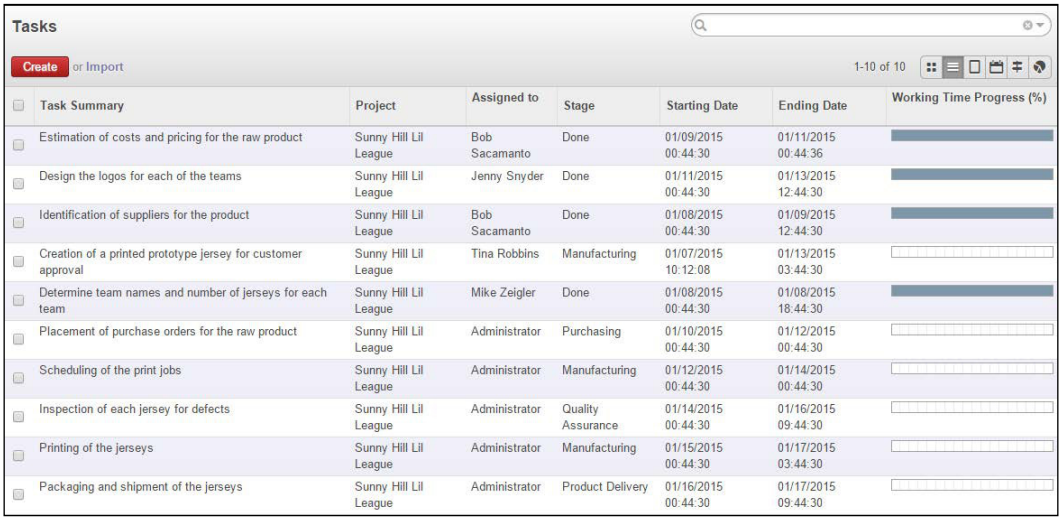
In addition to the Gantt view of the tasks, you can also pull up the tasks in the calendar view mode. While in the calendar view, on the right you can see the color legend showing each person that is assigned to the tasks.



Fortunately, unlike the Gantt view, in the calendar view, you can double-click on a task to bring it up for editing. You can also use the standard drag and drop features of the calendar to set a new due date for the task.

Completing project tasks

As you complete project tasks, you can bring them up and click on the **Done** button. At this point, the task falls out of the currently assigned stage and is moved to the **Done** stage. One easy way to see which tasks have been completed is to look at the tasks in the list view. In this view, you will see a green progress bar as well as **Done** written in the **Stage** column for every task that has been marked as complete:



Tasks

Create or Import 1-10 of 10

Task Summary	Project	Assigned to	Stage	Starting Date	Ending Date	Working Time Progress (%)
Estimation of costs and pricing for the raw product	Sunny Hill Lil League	Bob Sacamanto	Done	01/09/2015 00:44:30	01/11/2015 00:44:36	
Design the logos for each of the teams	Sunny Hill Lil League	Jenny Snyder	Done	01/11/2015 00:44:30	01/13/2015 12:44:30	
Identification of suppliers for the product	Sunny Hill Lil League	Bob Sacamanto	Done	01/08/2015 00:44:30	01/09/2015 12:44:30	
Creation of a printed prototype jersey for customer approval	Sunny Hill Lil League	Tina Robbins	Manufacturing	01/07/2015 10:12:08	01/13/2015 03:44:30	
Determine team names and number of jerseys for each team	Sunny Hill Lil League	Mike Zeigler	Done	01/08/2015 00:44:30	01/08/2015 18:44:30	
Placement of purchase orders for the raw product	Sunny Hill Lil League	Administrator	Purchasing	01/10/2015 00:44:30	01/12/2015 00:44:30	
Scheduling of the print jobs	Sunny Hill Lil League	Administrator	Manufacturing	01/12/2015 00:44:30	01/14/2015 00:44:30	
Inspection of each jersey for defects	Sunny Hill Lil League	Administrator	Quality Assurance	01/14/2015 00:44:30	01/16/2015 09:44:30	
Printing of the jerseys	Sunny Hill Lil League	Administrator	Manufacturing	01/15/2015 00:44:30	01/17/2015 03:44:30	
Packaging and shipment of the jerseys	Sunny Hill Lil League	Administrator	Product Delivery	01/16/2015 00:44:30	01/17/2015 09:44:30	

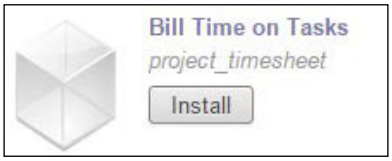
As you can see in the screenshot, we have marked off four of the tasks as complete or **Done**.

If, for some reason, you accidently mark a task as done or you find out later that there is additional work needed for a task, you can edit the task and click on the **Reactivate** button. The task will then return to its previous stage and will no longer be considered done.

Calculating project costs and time

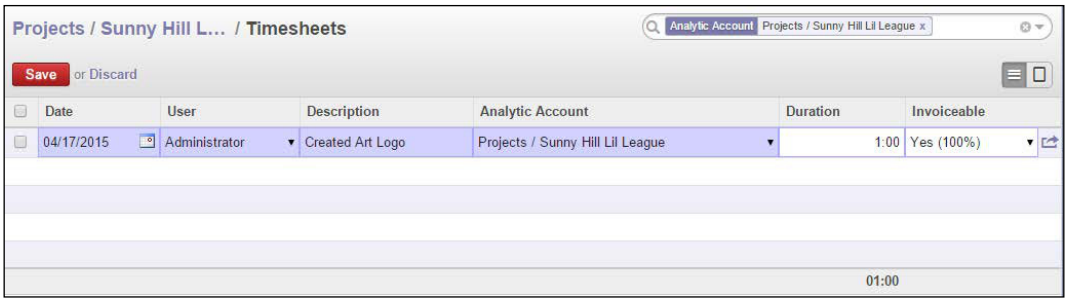
To calculate project costs and time, you can install the Human Resources application, **Timesheets**. This application lets you create timesheets for your employees that let you specify the number of hours worked per day. If you have been following along, you should already have this application installed from *Chapter 8*, *Implementing the Human Resources Application*.

To complete the integration so that you can use timesheets with the project manager, you must also install the module **Bill Time on Tasks** so that you can associate each task with the hours the employee worked on that task.



Once **Bill Time on Tasks** is installed you will see that if you bring up a project in Odoo, a new **Timesheets** button is available.

If you click on the **Timesheets** button, you will get a list view in which you can create new timesheet entries. In this example, we have attributed one hour of art design to the project.



You can see that we have specified the project and the duration, and we have indicated that this is billable time that can be invoiced. If you want, you can double-check under **Invoiced Tasks** to see the entry and the amount that will be invoiced once the timesheet has been processed. You can learn more about using timesheets and analytical accounting in *Chapter 8*, *Implementing the Human Resources Application*.

Summary

In this chapter, we examined the **Project Management** application. We created an example of a real-world project involving our Lil League organization. After setting up our project and assigning team members, we defined the various stages that would be involved in completing the project. With the stages defined, we were able to go through and assign various tasks to the stages along with their dates of completion. Finally, we looked at the various ways in which you can view the tasks and how you can complete them.

In the next chapter, we will explore how you can create advanced searches and custom dashboards in Odoo. As a company uses its system from day to day, the amount of data collected can grow quite rapidly. Being able to locate pertinent records in a speedy fashion is vital for optimum business operation. We'll discover how to utilize all of the handy searching, filtering, and dashboard presentation tools that are at our disposal within Odoo.

10
Creating Advanced Searches and Dashboards

In this chapter, we will cover advanced searching, custom filters, and dashboards. We begin by looking at how Odoo searches the various datasets within the system. Next, we explore more advanced search options and discuss how you can save these filters so they can be easily accessed when you need them. Finally, we discuss the Odoo dashboard capabilities and how we can improve usability for users.

The topics covered in this chapter include the following:

- Identifying users' search requirements
- Understanding default filters versus custom filters
- Grouping items in a list
- Setting and saving advanced search conditions
- Creating dashboard content and layouts

Determining the search requirements for your business

One of the tasks that can often be frustrating and time consuming for users is trying to find the information they need. When datasets are small and simple, there is not much of an issue. As the number of records in the system grows, it can become increasingly difficult to find information.

When implementing an ERP system, you will want to take the time to work with users and get familiar with the data they use each day. If you are working with a purchasing system that only produces an average of 10 purchase orders a day, you will have far less concern over advanced searching in that application. However, if you have 20 purchasing agents cutting 450 purchase orders a day, it will be critical that the users have a firm grasp on the search functionality of the system. Trying to locate a particular order can be like trying to find a needle in a haystack.

Take the time to sit with users and watch them use the system. Often, users will need to lookup the same types of data repeatedly in their daily interaction with the system. These are the activities that you will want to set up custom filters for and perhaps even include them on the user's dashboard.

Fortunately, Odoo offers a robust searching mechanism as well as the ability to create dashboards to display information that the user might need to look at frequently.

For the purposes of this chapter, we will create a new database with the demonstration data so you can better see the searches in action.

Creating a database with demonstration data

Often, it can be valuable to test certain features in Odoo without having to enter a lot of data. When you create a database, Odoo offers a way to optionally populate it with demonstration data. Since this chapter is focused specifically on searching and displaying data, we will load up a database with the sample data provided by Odoo.

Accessing the database manager

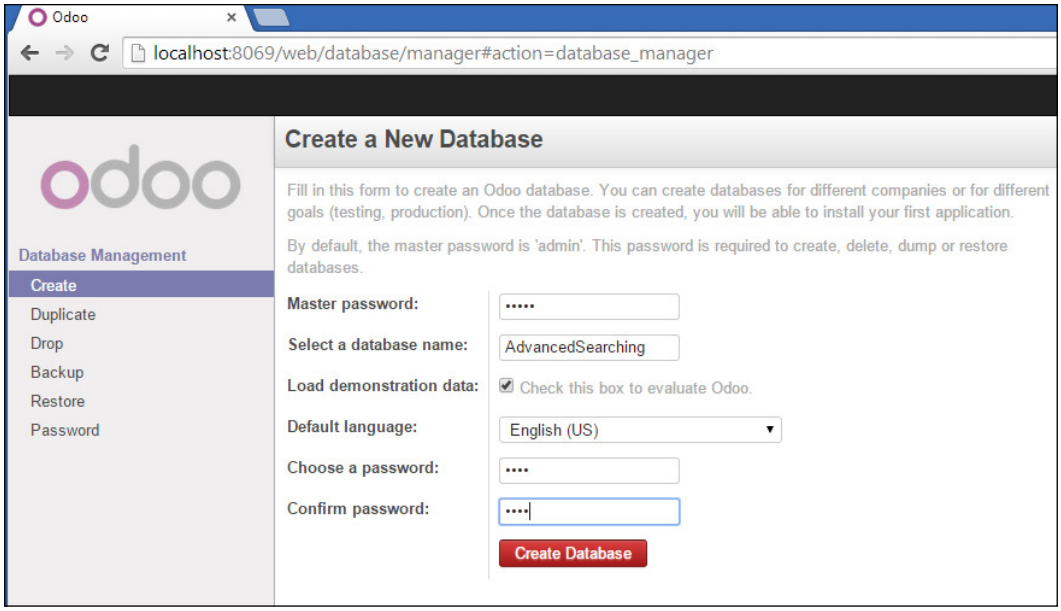
While it is possible to access the database manager by clicking on links in the login screen, there are times when that link is not available. One reason can be because the website application has been installed. In this case, the manage databases link is hidden from the home page.

Sometimes, if your Odoo server is throwing internal server errors or you are having other problems with your database, you can resolve the issue and at least make backups of your data, by going directly to the database manager.

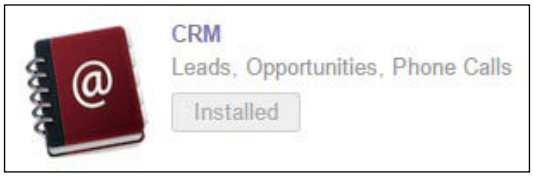
To access the database manager directly in the default installation of Odoo, you can use `http://localhost:8069/web/database/manager`.

Naturally, you will need to change the server address and port to match your Odoo installation.

When creating our database, we check **Load demonstration data** so that our database is prepopulated making it easier to present example search techniques.



After you click on **Create Database**, Odoo will set up the new database. So that we have an application to work with, we will install the **CRM** application.

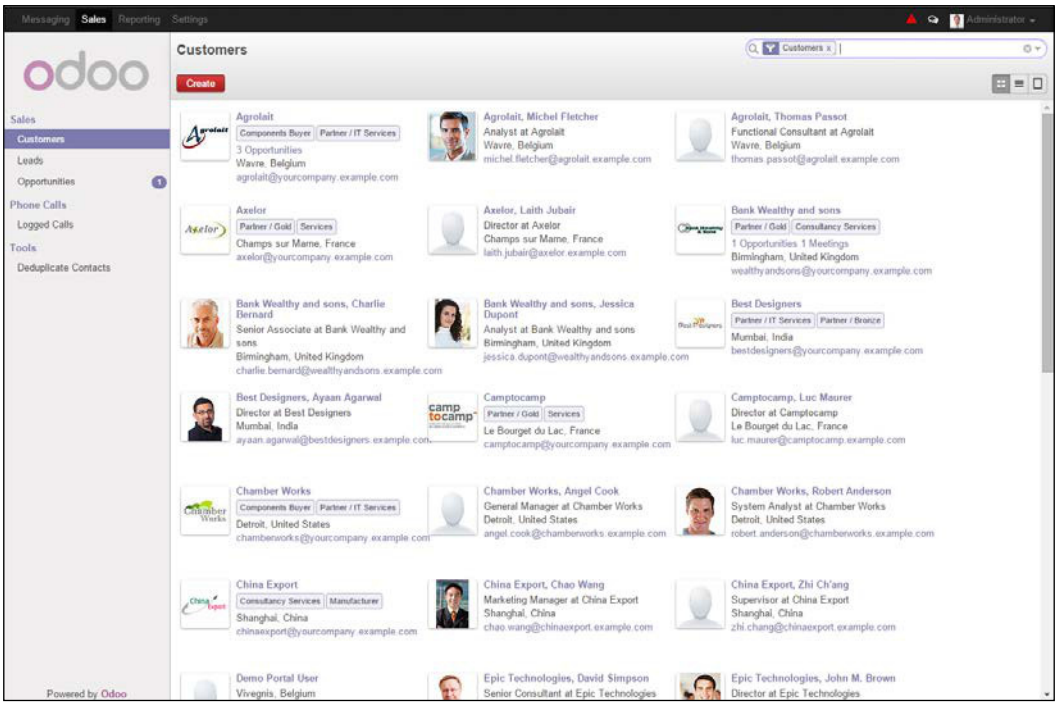


Searching in Odoo

Odoo provides a standardized search box at the top right in all of the list and Kanban views. Depending on the menu item, some forms come with predefined filters already set for the list.

If you navigate to **Sales** and select **Customer**, you can see the search box in the upper-right corner with the **Customers** filter preassigned.

Some lists open with a predefined filter that will limit the primary dataset. In the preceding screenshot, you can see that the list view **Customers** has a customer filter applied, by default, when you open the form. Odoo stores customers, vendors, and employees in the same central database table. The **Customer** filter prevents the other types of data, such as vendors or employees from being displayed in the list.

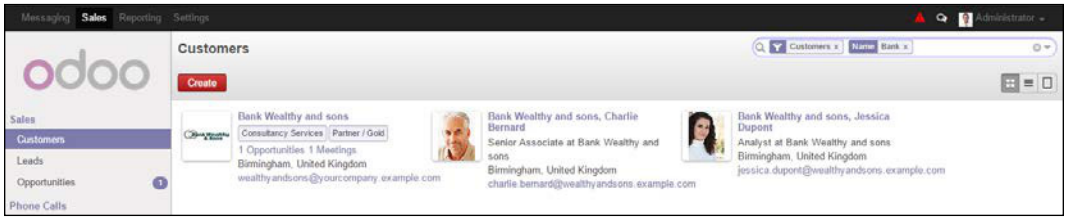


In this instance, if you clear the **Customers** filter by clicking on the small close box in the tag, you will have a list with not just customers. Instead, Odoo will return partners, users, suppliers, and contacts as well. The **Customers** filter is applied by default in this view.

Sometimes, users can get confused if they accidently remove the filter. If you are not getting the results you expect, always double-check the filter in the top right and if necessary, navigate from the view and back again to refresh the default filter.

Basic searches are handled easily in Odoo. Just go into the search box, begin typing, and press the *Enter* key. Odoo will then look at the primary search fields for the type of data you are searching for, and show you the results in the list or Kanban view.

In the following screenshot, you can see a simple search:



In this example, Odoo has returned all the customers that have Bank in their name.

Now, we can see that there are two filters applied. The default filter **Customers** that was already there when we opened the customer list and the **Name** filter that will limit those customers to just the names that include Bank.

The small space between the two filter tags means that both conditions are required for a record to be included in the results list (A and B).

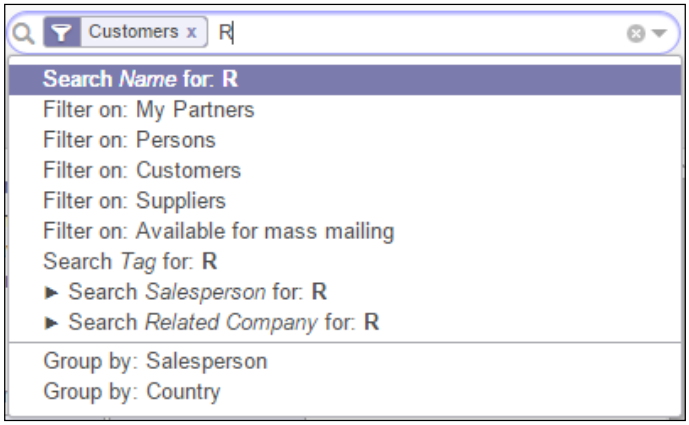
When two filter tags are butted up against one another without a space between them, it denotes that records might meet either condition (A or B).

Odoo will remember your search criteria as you move between list, Kanban, and form views. Once you go to another menu item, the search criteria will reset to the default search when you return.

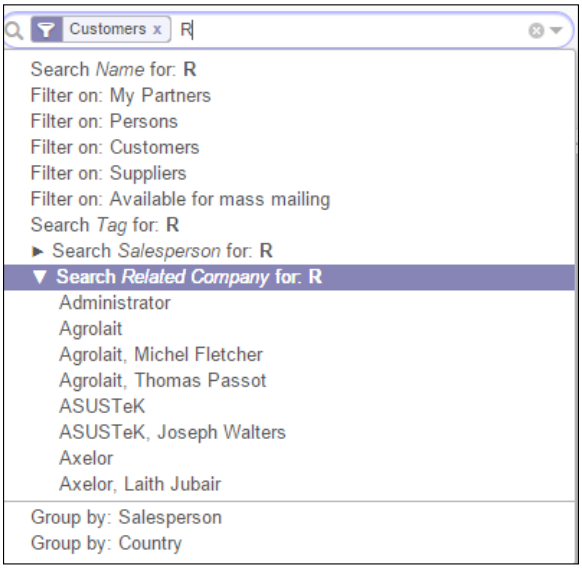
The small magnifying glass in the far left of the search box will allow you to repeat your search again. This would be most useful in an environment in which transactions are coming in quickly and you want to refresh your results with the latest data.

The preceding screenshot shows the search again magnifying glass, which is to the left of the **Customers** filter.

As you type in the search box before hitting the *Enter* key, Odoo will display the available filters in a small drop-down list, directly under the search box. In the previous versions of Odoo, with each letter you type, the results list will narrow down. In Odoo 8, the search has been redesigned to display all the available filters including **My Partners**, **Persons**, **Customers**, **Suppliers**, and **Available for mass mailing**.



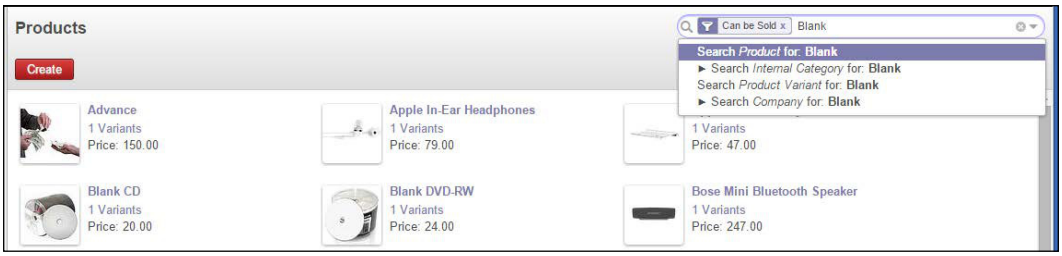
Type the letter `R` into the search box. You will notice how **R** is now in bold where it will be applied to the filter. Also, notice that to the left of **Search Salesperson** is a small triangle; clicking on this triangle will show an example of the results in the list:



Using filters in list views

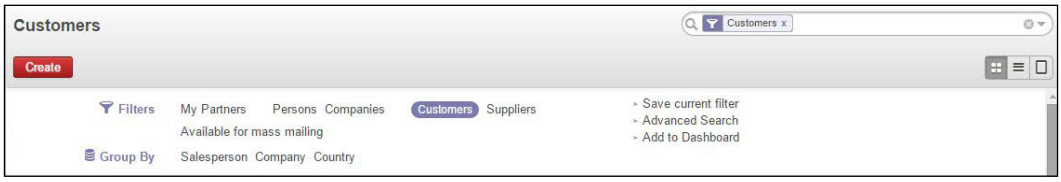
Odoo provides default filters for all of the list views. Applying a filter will limit the records that Odoo is displaying. You can apply one or more filters depending on your needs. The available filters and by what fields you can group, will vary depending on the data you are viewing.

For example, the **Products** view will have a completely different set of filters and group options compared to the **Customers** view.

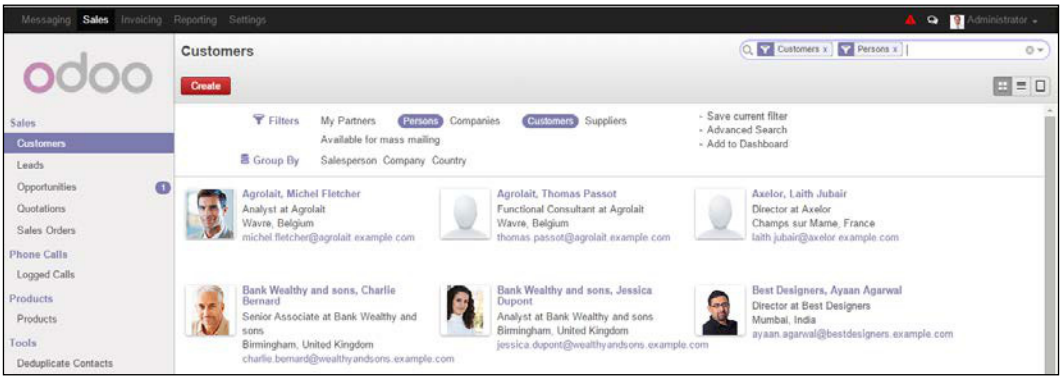


While each search box will have different default filters and group by options, the functionality is the same. In Odoo 8, you access all the search features by clicking on the small triangle on the far right of the search box.

When you click on this, Odoo will expand the search area to show all the search features. Let's return to the **Customer** list and click on the small triangle to bring up the advanced search options:



There is an area at the top that contains the default **Filters** and **Group By...** options. The second section on the right of the search area is the **Save current filter** option, where all of the user-defined filters will be stored for later use. Next, there is the **Advanced Search** option and finally an **Add to Dashboard** option to append the current search criteria to a dashboard.

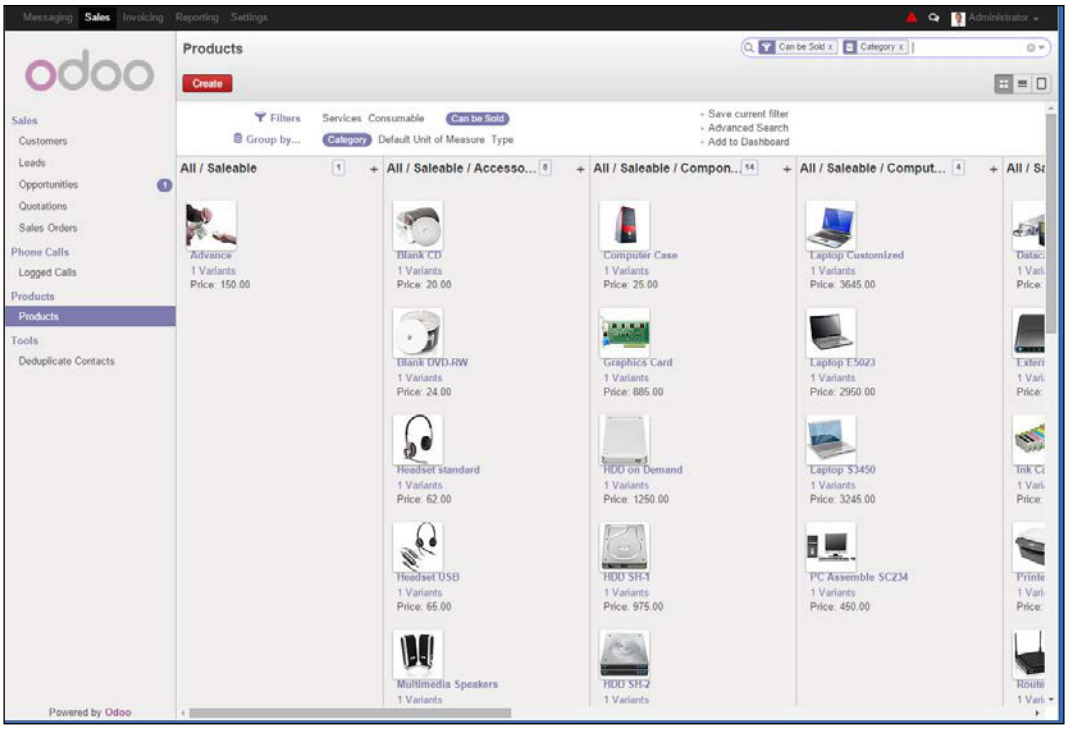


In the example dropdown in the preceding screenshot, you can see that we have highlighted the filters that have been applied, **Persons** and **Customers**. The tags for the filters are also displayed inside the search box. With these two filters applied, Odoo will show the contacts or persons who are also customers. Clicking on a filter applies the filter immediately and refreshes the result list.

Naturally, the list of available filters will change depending on which set of records you are viewing. Clicking on a filter that is already highlighted will remove that filter from the search.

Grouping information

In addition to filtering your results, you can also group data in most Kanban and list views using the **Group By** option. When you group data in a Kanban view, you will get a column for each category. You can then use the horizontal scrollbar at the bottom of your window to look through the items. This will be ineffective for items in which there are a very large number of groups.

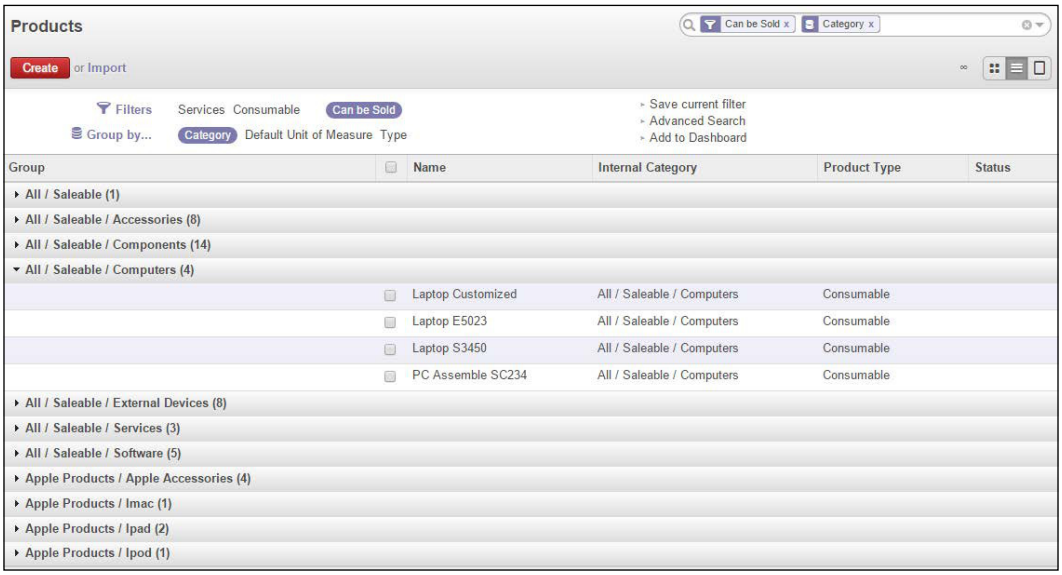


The preceding screenshot shows **Products** in the Kanban view, to demonstrate how a user will need to scroll not only up and down but also left and right to get a view all of the items.

You need to be somewhat careful when grouping in a Kanban view. If you group on a field that has many results, you will have to scroll a long way to the right to even turn off the filter. In this case, it is usually faster just to click over to another menu and come back to restore the default search settings.

Grouped data is often more easily represented in a list view.

When you group data in a list, a little triangle appears to the left of each group header. Clicking on this triangle will display the rows grouped under that header.



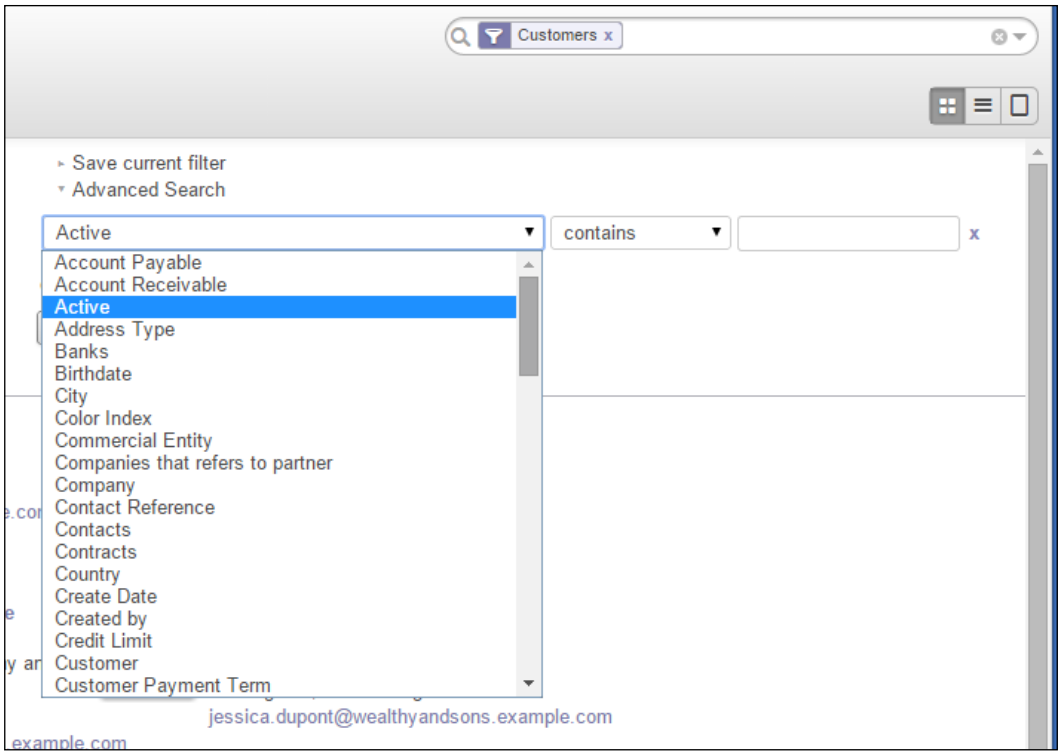
Filters and groups can be combined together to produce a list of results. To clear all search conditions and groupings at once, click on the circled **x** on the far right of the search box.

As shown in the previous screenshot, we have filtered by products that can be sold, by selecting the **Can be Sold** option in the **Filters** section; we also grouped our data by category, by selecting **Category** in the **Group by…** section. Next, we expanded the **Computers** category by clicking on the small triangle to the left. You can then see the list of products that are included under the **Computers** category. As with filters, clicking on **Category** again will remove the grouping. You can also nest groups inside of other groups simply by selecting additional items under **Group by...**.

Grouping can be a great way to look at data. Unfortunately, with extremely large datasets, grouping lists can be very slow because far more records must be processed if you are filtering and browsing data.

Performing an advanced search

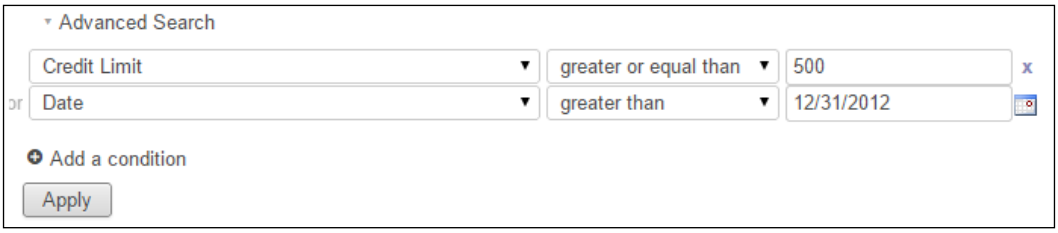
While the default filters might help us find most of the data records we seek, it is inevitable that there will come a time when we will need a more customized search. To create an advanced search, click on the down arrow on the right of the search box and then click on **Advanced Search** to expand the available options. Here, you will get a drop-down list of fields that can be used to set our search criteria.



Choosing a field from the list will allow you to select from the available search operators as well as specify the data for which you wish to search. Click on **Add a condition** to enter further criteria. Clicking on the small **x** to the right of a search condition will delete that condition from your **Advanced Search**.

In Odoo, you will often find it a best practice to make records inactive when they are no longer required. For example, if you discontinue a product, you will often find yourself unable to delete that product because there are transactions tied to it. Therefore, you will want to make that product record inactive. By default, Odoo will hide inactive records. If you need to retrieve inactive records, use **Advanced Search** to create a condition where the **Active** field `is false` and then apply it to this filter.

You can continue to add additional criteria to your **Advanced Search**. When you have specified all the criteria you want to use in your search, click on the **Apply** button to apply the custom filter.

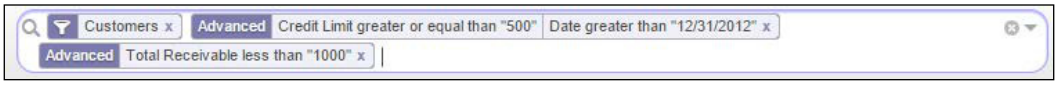


In the **Advanced Search** option, we have specified two conditions: **Credit limit** must be greater or equal than 500 or the date that the customer was acquired must be greater than **12/31/2012**. Many users can get confused and believe that this filter would imply that both **Credit Limit** and **Date** must meet our criteria, but it is not so. Notice, the faint little **or** to the left of the second condition.

Specifying multiple advanced searches

As you can see in our previous example, Odoo will always use an **or** operation between each of the conditions you add to the search. But what if we want a search where the credit limit is greater than `500` and the date the customer was acquired is greater than **12/31/2012**? To accomplish this, you must first apply the advanced search with only the credit limit condition defined. That will limit the results to only records of customers that have **Credit Limit greater than** `500`. Then, you can go back and add a second advanced search that only contains the **Date greater than 12/31/2012** condition.

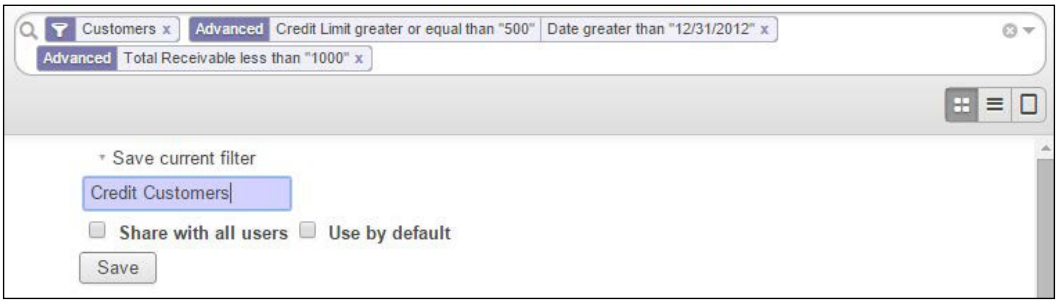
Just remember that if you want both conditions to be true, then they must be applied separately. If you want either of the conditions to be true, then add them together in one search.



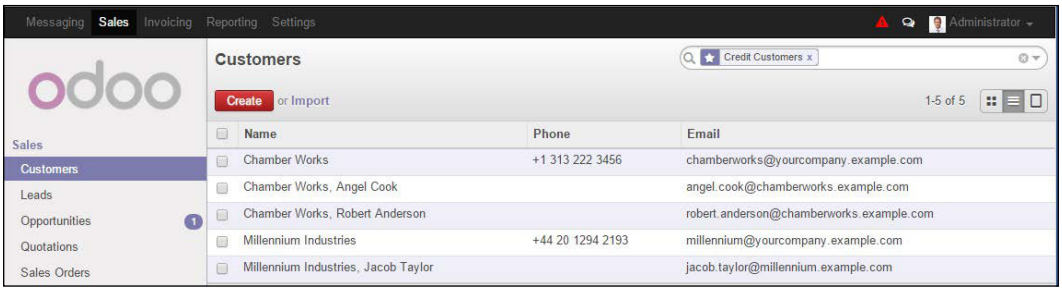
In the previous screenshot, we created a search that will return customers that have a credit limit greater than or equal to 500; or a customer acquisition date greater than 12/31/2012, and each of those customers must also have a total receivables less than 1000.

Saving your advanced searches

While advanced searches are quite powerful, they can often take a bit of time to configure and get the results just like you want them. Fortunately, Odoo allows you to save your searches so that you will not have to build them from scratch each time. To save a custom search, click on the little triangle next to **Save current filter**, provide a name for the search, and then click on **Save**.



Once you click on **Save**, the filter is added to your list of **Custom Filters** and can be applied just like the default Odoo filters. In addition, you can also have the option to save the custom filter for all users, and even set a custom filter as the default filter to be applied when you bring up the list.



In the preceding screenshot, we applied the custom filter, **Credit Customers**, which we just saved. As you can see, the criteria at the top no longer shows all the detail in the advanced search and instead, uses the name you provided when you saved the custom filter.

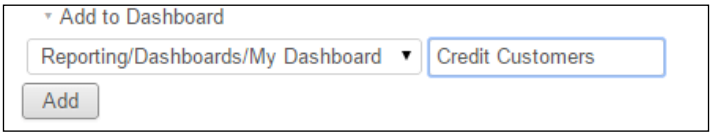
There is no easy way for an end user to see what the criteria of their search is, after they have named and saved their search for later use. Like in our example, **Credit Customers** is all we will see when returning to the search later. Until Odoo provides an easier method, users should be encouraged to document their searches.

The ability to save advanced searches into your own custom filters and make them available for other users, allows you to better customize Odoo for your business requirements.

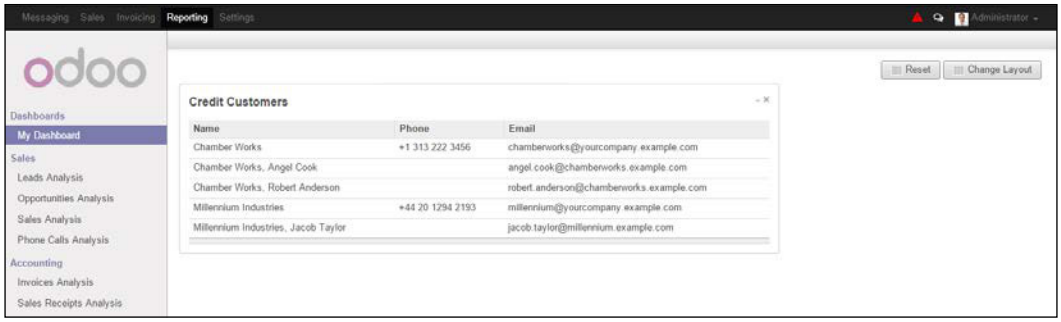
Adding information to your custom dashboard

Dashboards allow you to take information that you need to look at frequently and put it together in one place. Odoo has a very flexible dashboard system. Each user has a personal dashboard named `My Dashboard` provided with the default Odoo setup.

To add a new result set to your dashboard, simply click on the little triangle next to **Add to Dashboard**. By default Odoo, will prompt you to add the search list to your own personal dashboard. However, if you wish, you can add the results to any dashboard by selecting the name of that dashboard in the list and clicking on the **Add** button.

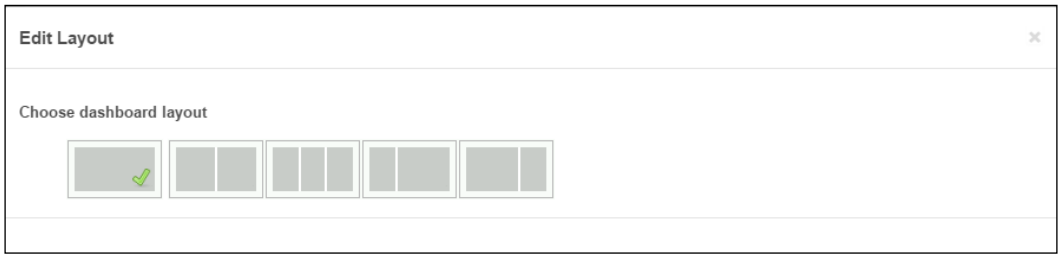


In this example, the current **Credit Customers** filter we created in the previous step will be added to **My Dashboard**, which can be found as the first option under the **Reporting** menu.

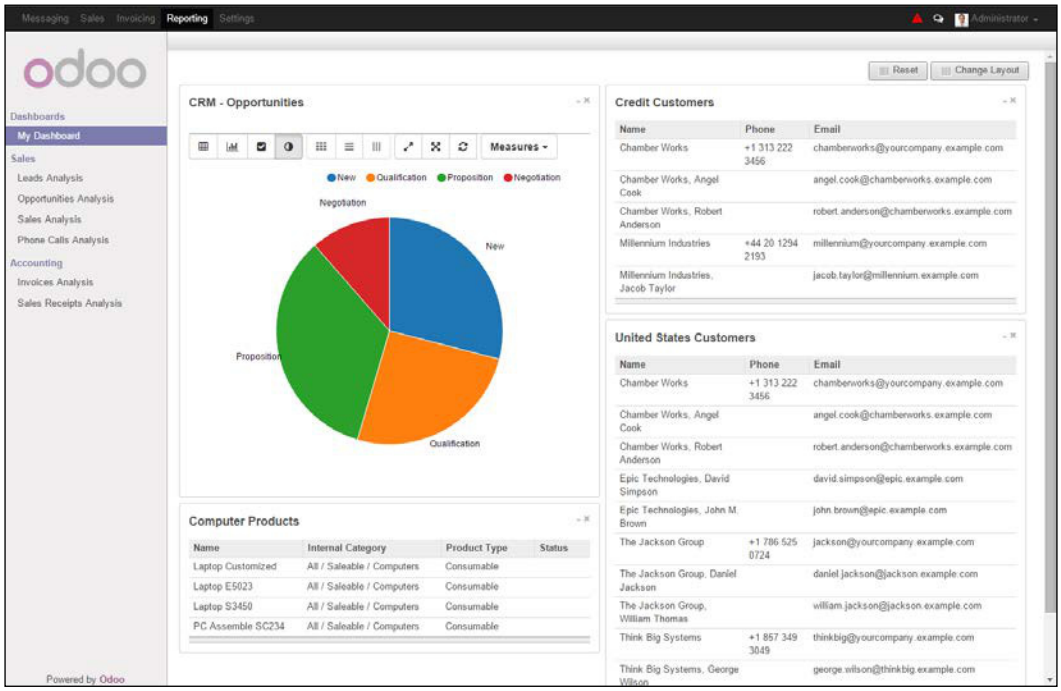


Odoo provides a variety of layouts so you can customize the appearance of the dashboard according to your preference. For example, you might want to have two columns of lists summarizing your sales or, if there are view columns, you might choose to have a column of three lists.

Clicking on the **Change Layout** button will bring up a small pop-up window to allow you to select an alternate layout.

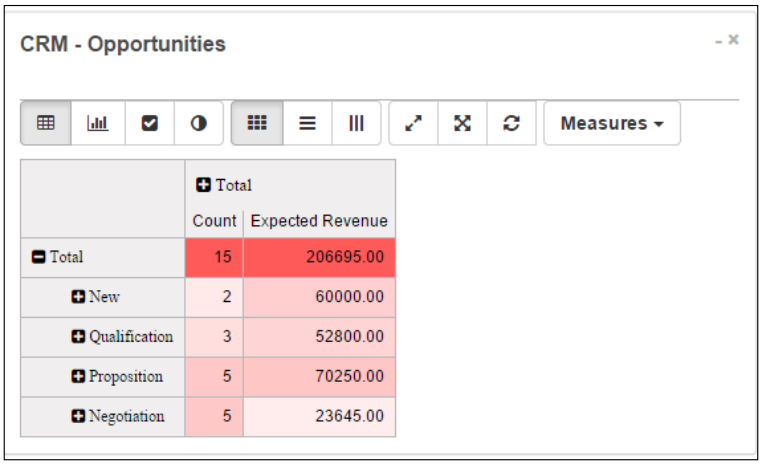


In the top-right corner of each item added to the dashboard, you can click on the little underscore icon to collapse the report area down to just its title. To arrange items on your dashboard, simply click and drag the item to drop it in the desired location. Finally, you can remove an item from the dashboard by clicking on the close box in the upper-right corner of the item.



In this example, we have added a few more items to the dashboard and arranged them into two columns. Adding a graph is just as easy as adding a list view to the dashboard. In this example, we went under **Opportunities**, changed the view to graph, and then added it to our dashboard. For graphs, there is a toolbar above the graph that allows you to change properties that determine how the graph is displayed.

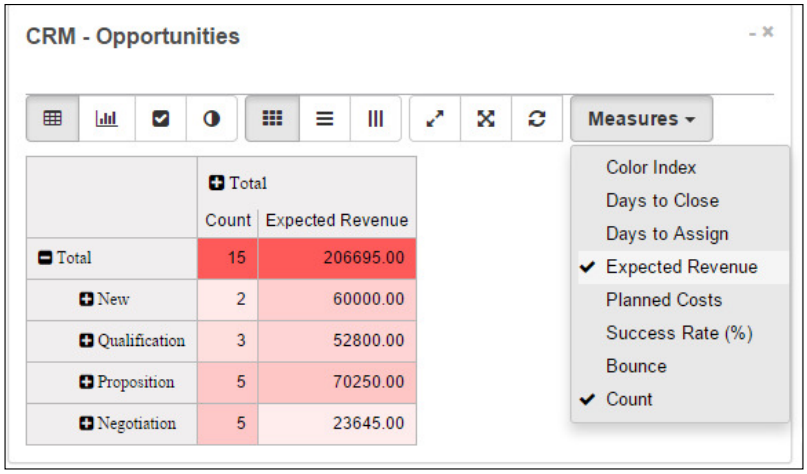
The first group of four icons on the left determine the main format for how the data is displayed. This can be either data in a table, bar graph, line chart, or pie chart. In this example, we have selected the pie chart. The next three buttons are heat maps that are only active if you are using data in a table form.



As you can see, the heat map will darken the larger numbers and lighten the smaller numbers.

The third group of icons allows you to swap the axis of the data, expand all the rows and columns, or refresh the data to update it if there have been any changes since the data was displayed.

The **Measures** drop-down menu allows you to pick which data items you want to plot in your table or graph:



Summary

In this chapter, we examined Odoo's advanced searches and dashboards. Advanced searching allows you to search on a variety of fields as well as save your searches so you can easily pull them up later. Using these features, you can more easily find the data you are looking for, and place the data that you need frequently into your own personal dashboard.

In the next chapter, we will explore Odoo's powerful new website builder that integrates with Odoo business applications and e-commerce solutions.

11
Building a Website with Odoo

In this chapter, we will look at, perhaps, the most important new business application added to Odoo in version 8, the Odoo Website Builder application.

In this chapter, we will cover the following topics:

- Introducing **Content Management Systems** (**CMS**) and how they make it possible to manage websites
- Modifying pages with Odoo's Website Builder
- Inserting and customizing blocks
- Learning to use important Odoo website blocks
- Editing the menu of your website and organizing pages
- Selecting themes for your website
- Promoting your website

What is CMS?

The Website Builder application available for Odoo 8 can be considered, what is commonly known as, a Content Management System or CMS. A CMS provides a collection of tools that allow you to structure, organize, and manipulate your website without having to interact directly with the inner workings of your website. A key feature of a CMS is the ability for nonprogrammers and those with little technical expertise to create and edit content on the website once the initial structure of the site has been designed.

Odoo is entering into a very crowded market that has a great variety of both open source and paid CMS products, from which you can choose to build your website. Here are a few of the most popular website CMS, all of which at this point have considerably more configuration options and greater levels of adoption.

WordPress

WordPress is arguably the most popular CMS that companies choose to deploy for their website. More than a decade of maturity and a massive install base means that there are plenty of themes, add-ons, and professionals that can support a WordPress website. In addition, WordPress is open source, based on PHP, and continues to be developed aggressively and in more recent versions, it is targeting improved social networking features.

Joomla

Also, enjoying great popularity in the crowded CMS market, written in PHP and open source, is Joomla. This CMS, while perhaps not as often deployed as WordPress, has thousands of available plug-ins and can be found under some very prominent sites on the Internet. A few of the more high profile sites that use Joomla for their CMS include Harvard University and the Guggenheim Museum.

Drupal

No list of popular CMS solutions would be complete without Drupal. Like the other two, this CMS is also PHP-based and open source. For the most part, Drupal has more advanced capabilities and would be considered for sites more complex than perhaps you would use to build in WordPress. While there are fewer available themes for Drupal than for Joomla or WordPress, that has not kept Drupal from being the CMS for very popular websites including Popular Science and Sony Music.

Evoq or DotNetNuke

This content manager, previously known as **DNN** or **DotNetNuke**, has recently been through its own rebranding effort, much like OpenERP became Odoo. So according to their own news release, DotNetNuke is no more, and is now to be known as **Evoq**. While not nearly as popular as the other three listed, Evoq has the distinction of being a Windows Server based solution that uses Microsoft's .NET platform. Some big names using Evoq for their CMS include Hilton and Samsung.

These are just a few of many CMS options; others include Typo3, Frontpage, PublishMe.se, and Plone, all of which are very popular throughout Europe. The type of CMS you need depends heavily on your requirements for your website. Do you need to edit content frequently? Would you like to have a shopping cart that integrates with your accounting system? Does your website need to be mobile-friendly? These are all questions to consider when choosing a CMS.

Why use Odoo Website Builder for your CMS?

With so many CMS solutions available that have far better support and mature features, a very valid question is: *Why would I use Odoo's Website Builder for my CMS?* Not only is this a good question to ask, it is vital when building a website for your company that you pick the tools that work best for your given situation and requirements. So let's quickly look at some of the pros and cons to get a quick look at what are the strengths and weaknesses of using Odoo as the CMS to build your website.

The potential advantages to using Odoo as a CMS

While Odoo is still new and does not offer the proven track record and the number of successful websites as the CMS products, which were previously mentioned, there are still some very compelling reasons to consider Odoo as your CMS:

- One-click setup, if you already have Odoo installed.
- Very easy-to-use features, such as fast page editing and simple controls.
- Great support for mobile devices.
- Powerful built-in language translation support.
- Seamless integration with Odoo to leverage many of the applications already available. This includes CRM and Marketing applications but is especially true for the e-commerce application that will be covered in the next chapter.
- A growing number of professional themes that will make the Odoo Website Builder an attractive option in the years to come for those who are already using Odoo.
- Good built-in promotional tools.

The current limitations of using Odoo as a CMS

Despite a growing list of positive reasons to consider Odoo as your CMS, there are also some reasons why its current version might not be the CMS for every solution:

- Very limited support among hosting companies, website designers, and consultants. If your Odoo website breaks, you are reliant on Odoo experts to fix your website.

- Limited CMS functionality for version control of your web pages.
- Difficulty configuring custom URLs and utilizing subdomains.
- Complex (and sometimes confusing) security of web pages and assignment of access permissions.
- There are a very limited set of themes available that work directly with Odoo and the professional themes that are available are expensive.
- Immaturity of the CMS itself might cause volatility in the years ahead as new features are added making it a challenge to move your website between databases of various Odoo versions.
- Lack of an easy way to move websites or webpages between Odoo databases, which can add to integration, testing, and deployment challenges.
- Possible vulnerabilities if the publicly-accessed web portal's connections to customer, employee, and accounting data are not amply tested for security holes.

Deciding what is best for your company

Currently, Silkworm, the company we are using for our real business example, does not use Odoo for their CMS. That said, we expect this could change in the years ahead and the previously mentioned positive benefits of using Odoo for your website might be enough to make it a good choice.

Backing up the website you make in your Odoo database

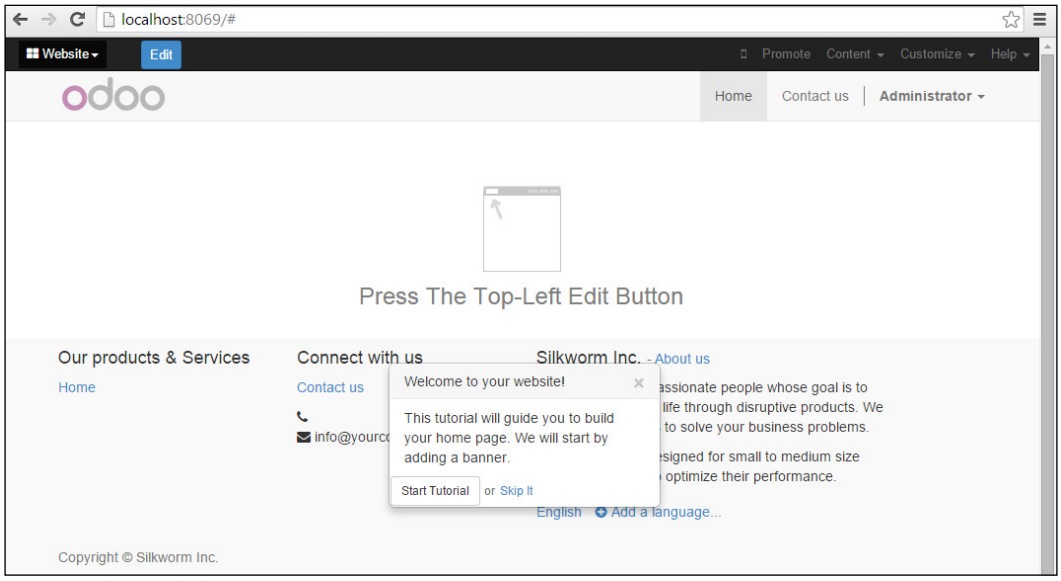
If you do use Odoo's Website Builder for your website, backup your database often. All of the web pages you create are stored inside your database. So you must back it up to make sure you have a copy of your website. Additionally, you'll want to make sure you keep your Odoo application files backed up as well, because static themes, images, and CSS files that are located there must be available to properly display your website.

Installing the Odoo Website Builder

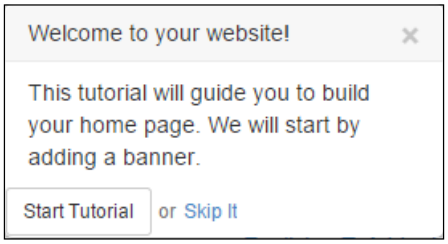
One of the greatest reasons to consider Odoo's Website Builder is that you can try it out in a matter of seconds. Just install the Website Builder like you would any other Odoo application. Go to **Settings**, choose **Local Modules**, and search for **Website Builder**:

Once you click on **Install**, Odoo will install the required modules and automatically redirect you to the home page of your new website. Also, you should be presented with a Website Builder tutorial that will walk you through some of the basics of building your website.

Here, we can see the initial web page presented by Odoo:



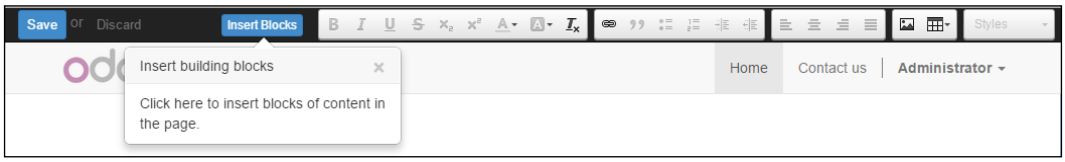
In the middle of the screen, the tutorial presents the **Welcome to your website!** message and a brief introduction of what the tutorial will cover. We will go ahead and use this tutorial to highlight the basic features of the Odoo Website Builder application:



Clicking on the **Start Tutorial** button will direct your attention to the **Edit** page button at the top-left corner of the screen. This button is available on every page while you are on your Odoo website. Clicking on this **Edit** button will toggle your page into the edit mode so you can make changes to your website.

Click on the **Edit** button to begin editing your home page.

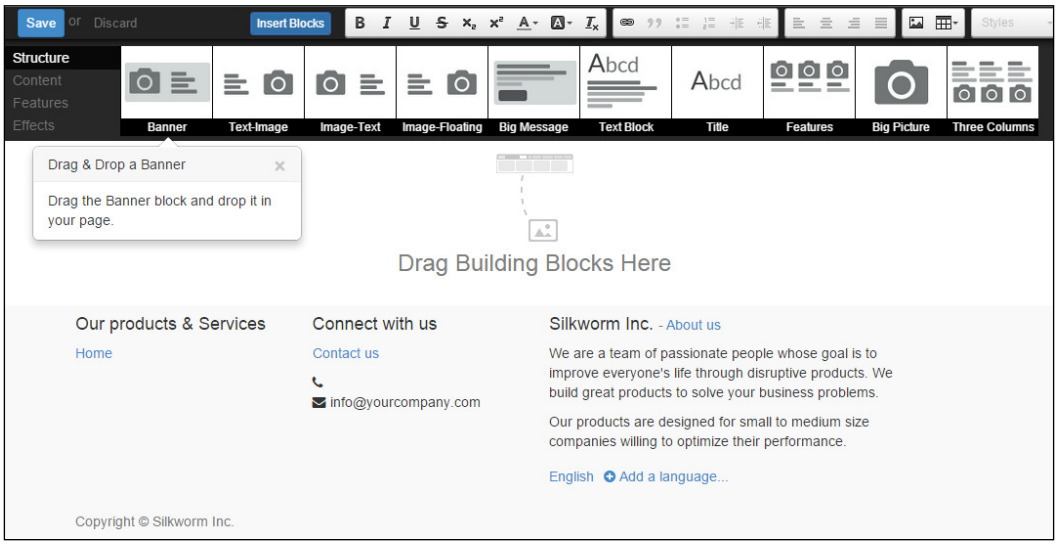
After clicking on the **Edit** button, your page should refresh to display the toolbars and options available to edit your web page.



Here, we will see that the tutorial will prompt you to insert blocks into your page. This is the action you will take anytime you want to add additional content to your web page.

Building blocks can house text, images, or a combination of these in various formats, such as an image with text above, beside, or below it, or large, bold heading text with smaller paragraph text below it. Also, note that the instructions that walk you through each step are just for the tutorial that is run the first time. Once you have completed the tutorial (or have closed it intentionally), it will no longer give you interactive directions.

Click on **Insert Blocks** to add new content to your web page:



Once you click on **Insert Blocks**, the page refreshes to display a list of blocks available under the **Structure** category on the far left. The tutorial then prompts you to drag and drop a banner block from the toolbar on to your web page. The **Drag Building Blocks Here** prompt in the middle of the page shows you exactly where you must drop your first block on the page.

Click on and hold your left mouse button over the banner block and drag it out onto your web page. The web page will immediately update to show you the banner along with a snippet of text with a button to the left.