

# APEX - EXAMPLE

## Enterprise Application Development Example

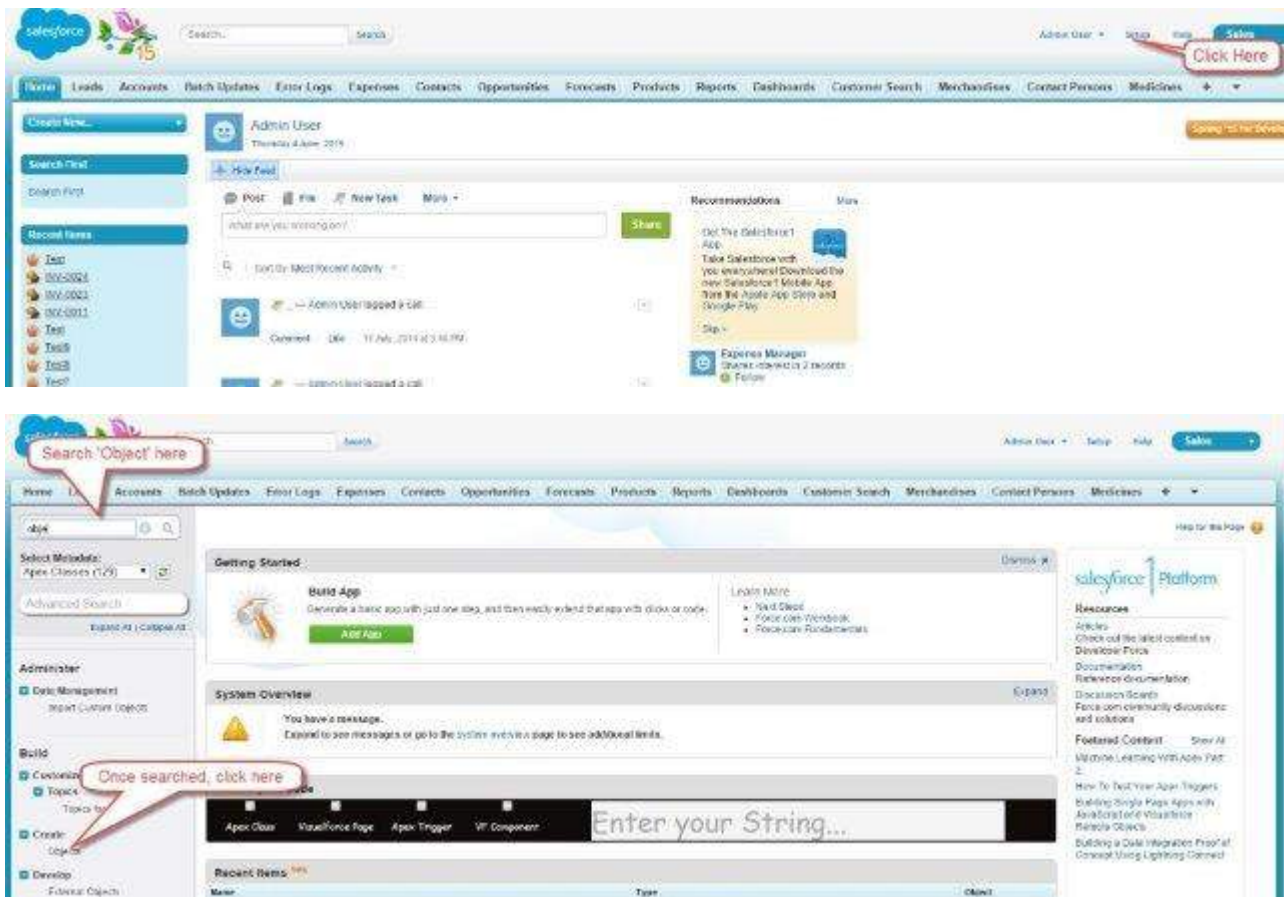
For our tutorial, we will be implementing the CRM application for a Chemical Equipment and Processing company. This company deals with suppliers and provides services. We will work out small code snippets related to this example throughout our tutorial to understand every concept deeply.

For executing the code in this tutorial, you will need to have two objects created: Customer and Invoice objects. If you already know how to create these objects in Salesforce, you can skip the below steps. Else, you can follow the step by step guide below.

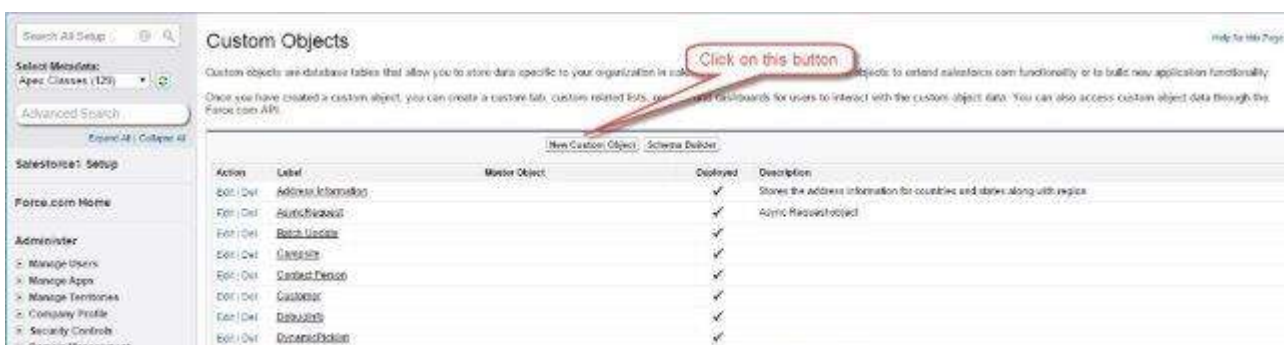
## Creating Customer Object

We will be setting up the Customer object first.

**Step 1:** Go to Setup and then search for 'Object' as shown below. Then click on the Objects link as shown below:



**Step 2:** Once the object page is opened, then click on the 'Create New Object' button as shown below:



**Step 3:** After clicking on button, new object creation page will appear and then enter all the object details as entered below. Object name should be Customer. You just have to enter the information in the field as shown in below screenshot and keep other default things as it is.

Enter the information and then click on 'Save' button:

By following above steps, we have successfully created the Customer object.

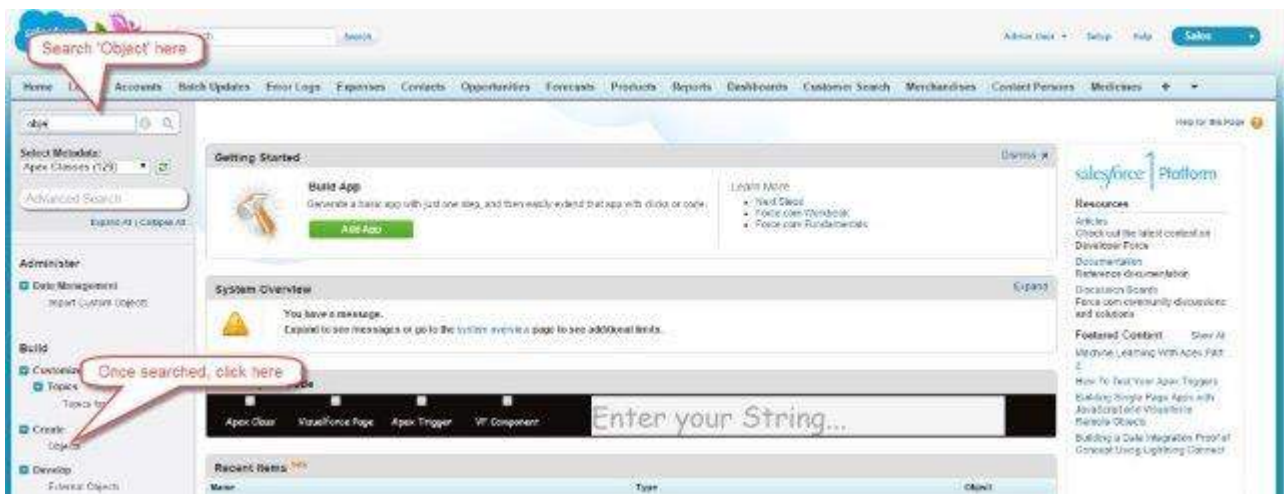
## Creating the Custom Fields for Customer object

Now that we have our Customer object set up, we will create a field 'Active' and then you could create the other fields by following similar steps. The Name and API name of the field will be given in the screenshot.

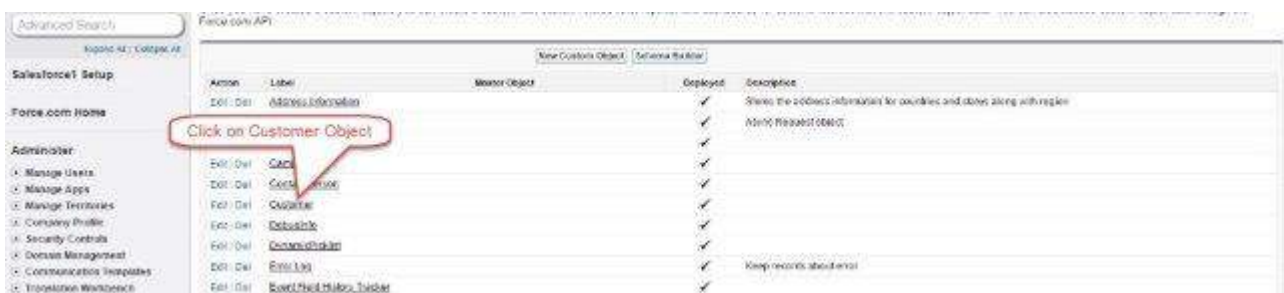
**Step 1:** We will be creating a field named as 'Active' of data type as Checkbox. Go to Setup and click on it.



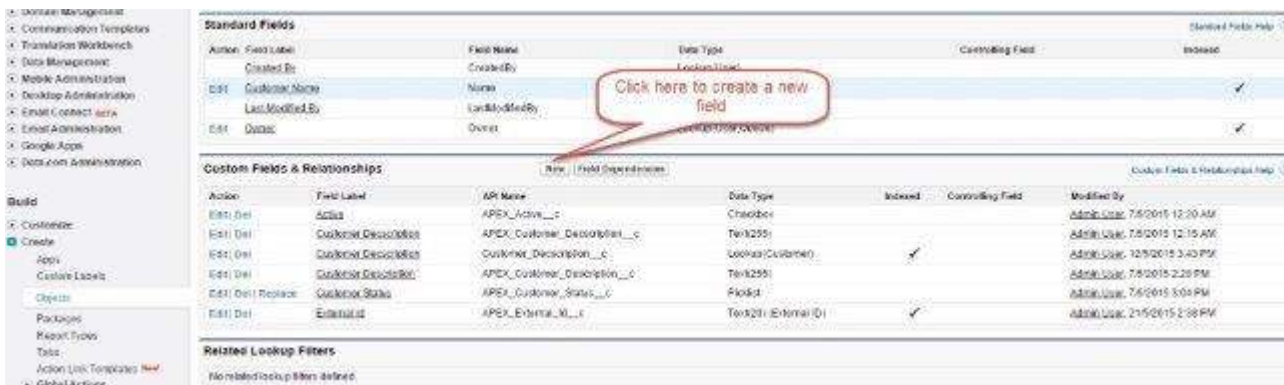
**Step 2:** Search for 'Object' as shown below and click on it:



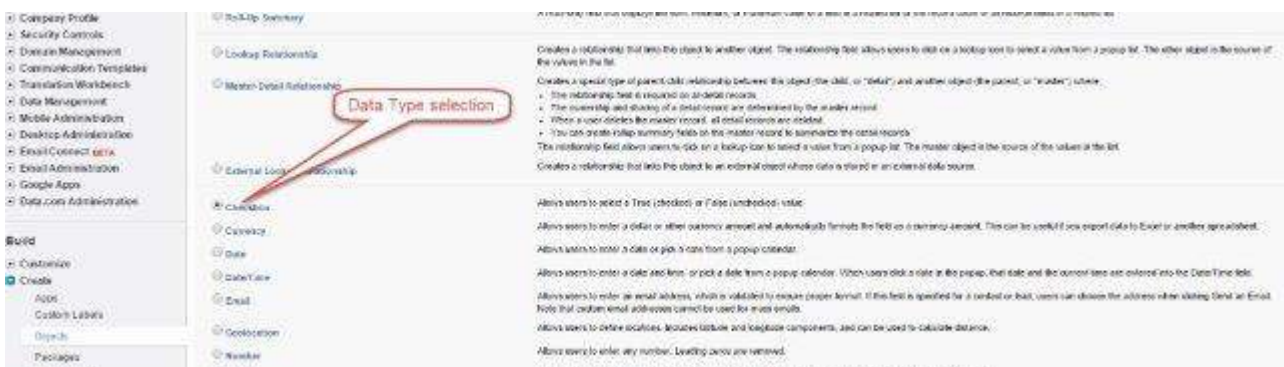
**Step 3:** Click on object 'Customer':



**Step 4:** Once you have clicked on Customer object link and the object detail page appears, click on the New button:



**Step 5:** Then select the data type as Checkbox and click next:





**Step 6:** Enter the field name and label as shown below:

Step 2: Enter the details

Field Label:

Field Name:

Default Value: ☐ Checked ☒ Unchecked

Description:

Help Text:

Callout: Enter the field label as well as Field Name as shown and click next

**Step 7:** Click on Visible and then click Next:

Step 3: Establish field-level security

Field Label: Active  
Data Type: Checkbox  
Field Name: APEX\_Active

Select the profiles to which you want to grant edit access to this field via field-level security. The field will be hidden from all profiles if you do not add it to field-level security.

Field Level Security for Profile	Visible	Read-Only
Contract Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom Org Data Proxy User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom Marketing Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom Sales Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom Support Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Callout: Click on Visible and then next

Click on 'Save'.

Step 4: Add to page layouts

Field Label: Active  
Data Type: Checkbox  
Field Name: APEX\_Active

Select the page layouts that should include this field. The field will be added as the last field in the last field in the first 2-column section of these page layouts. The field will not appear on any page if you do not select a layout.

To change the location of this field on the page, you will need to customize the page layout.

☒ Add Field ☐ Page Layout Name

☒ Custom Layout

Callout: Click on Save

By following above steps, our custom field 'Active' is created. You have to follow all above custom field creation steps for remaining fields. This is the final view of customer object once all field are created:

Customer Object

Standard Fields (1) | Custom Fields & Relationships (3) | Validation Rules (3) | Page Layouts (2) | Email Templates (2) | Content Layouts (2) | Search Layouts (2) | Buttons, Links, and Actions (3) | Record Types (2) | Apex Classes (Settings) (2) | Object Setup (2)

Custom Object Definition Detail

Object Label: Customer  
Object Name: APEX\_Customer  
API Name: APEX\_Customer\_\_c

Created By: Admin User 4/5/2015 8:30 PM

Final View of Customer Object

Field Label	Field Name	Data Type	Controlling Field	Standard Fields Help
Customer ID	CustomerID	Lookup (User)		
Customer Name	CustomerName	Text (50)		
Customer Email	CustomerEmail	Text (50)		
Customer Phone	CustomerPhone	Text (20)		
Customer Address	CustomerAddress	Text (255)		
Customer City	CustomerCity	Text (20)		
Customer State	CustomerState	Text (20)		
Customer Zip	CustomerZip	Text (10)		
Customer Country	CustomerCountry	Text (20)		
Customer Created Date	CreatedDate	DateTime		
Customer Last Modified Date	LastModifiedDate	DateTime		
Customer Created By	CreatedBy	Lookup (User)		
Customer Last Modified By	LastModifiedBy	Lookup (User)		
Customer Is Active	IsActive	Boolean		

Callout: Create the custom fields as shown below

Action	Field Label	API Name	Data Type	System?	Controlling Field	Modified By
Get: Del	Active	APEX_Active__c	Checkbox			ADMIN USER: 7/5/2015 12:26 AM
Get: Del	Customer Description	APEX_Customer_Description__c	Text(255)			ADMIN USER: 7/5/2015 12:15 AM
Get: Del	Customer Description	Customer_Description__c	Lookup:Customer	✓		ADMIN USER: 12/5/2015 3:43 PM
Get: Del	Customer Description	APEX_Customer_Description__c	Text(255)			ADMIN USER: 7/5/2015 2:28 PM
Get: Del: Replace	Customer Status	APEX_Customer_Status__c	Picklist			ADMIN USER: 7/5/2015 2:04 PM
Get: Del	External ID	APEX_External_ID__c	Text(20): External ID	✓		ADMIN USER: 7/5/2015 2:38 PM

## Creating Invoice Object

**Step 1:** Go to Setup and search for 'Object' and then click on the Objects link as shown below:

The screenshot shows the Salesforce Setup page. A red callout bubble points to the search bar with the text "Search 'Object' here". Another red callout bubble points to the "Objects" link in the left sidebar with the text "Once searched, click here".

**Step 2:** Once the object page is opened, then click on the 'Create New Object' button as shown below:

The screenshot shows the "Custom Objects" page in Salesforce Setup. A red callout bubble points to the "New Custom Object" button with the text "Click on this button".

**Step 3:** After clicking on button, new object creation page will appear as shown below and then enter all the object details as entered below. Object name should be Invoice. This is similar to how we created the Customer object earlier in this tutorial.

The screenshot shows the "New Custom Object" page in Salesforce Setup. A red callout bubble points to the "New Object page" button with the text "New Object page".

Starts with vowel sound ☐

The Object Name is used when referencing the object via the API

Object Name  Example: Account

Description

Context-Sensitive Help Setting ☐ Open the standard Salesforce.com Help & Training window  
☐ Open a window using a Visualforce page

Context Name  --None--

**Enter Record Name Label and Format**

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API

Record Name  Example: Account Name

Data Type  Text

Enter the information as shown below and then click on 'Save' button:

Search All Setup

Select Metadata: Apex Classes (129)

Advanced Search

Setup All | Collapse All

Salesforce1 Setup

Force.com Home

Administrator

- Manage Users
- Manage Apps
- Manage Territories
- Company Profile
- Security Controls
- Domain Management
- Communication Templates
- Translation Workbench
- Data Management
- Mobile Administration
- Desktop Administration
- Email Connect (beta)
- Email Administration
- Google Apps
- Data.com Administration

Build

- Customizable
- Create
- Apps
- Custom Labels
- Objects

Custom Object Definition Edit

Custom Object Information

The singular and plural labels are used in tabs, object labels, and reports. Be careful when changing the name or label as it may affect existing integrations and merge templates.

Label  Invoice Example: Account

Plural Label  Invoices Example: Accounts

Starts with vowel sound ☐

The Object Name is used when referencing the object via the API

Object Name  APEX\_Invoice Example: Account

Description

Context-Sensitive Help Setting ☐ Open the standard Salesforce.com Help & Training window  
☐ Open a window using a Visualforce page

Context Name  --None--

**Enter Record Name Label and Format**

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API

Record Name  Invoice Name Example: Account Name

Data Type  Auto Number

Create Format  INV-0000 Example: A-0000 (What is This?)

Optional Features

- ☐ Allow Reports
- ☐ Allow Activities

Enter object name as 'Invoice'

Enter all the information as shown in this screenshot and keep other default things as it is.

By following these steps, your Invoice object will be created.

## Creating the Custom Fields for Invoice object

We will be creating the field Description on Invoice object as shown below:

**Step 1:** Go to Setup and click on it.



**Step 2:** Search for 'Object' as shown below and click on it:



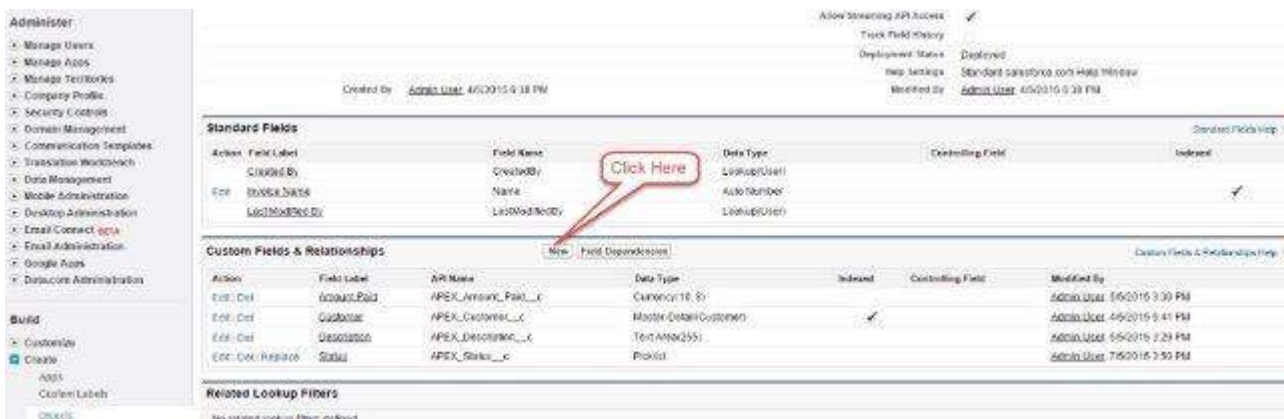




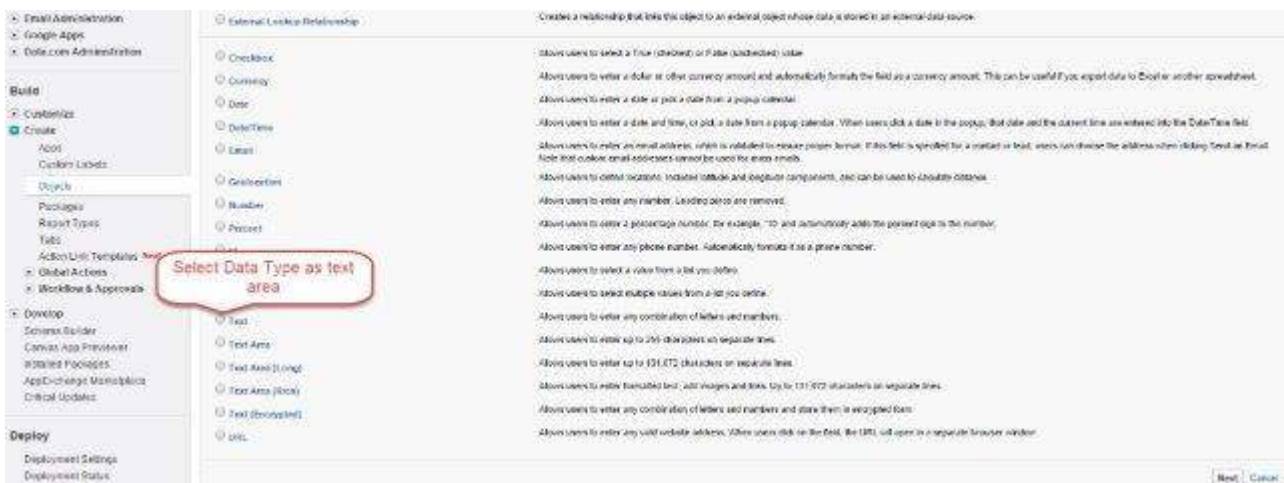
**Step 3:** Click on object 'Invoice'.



And then click on 'New'.

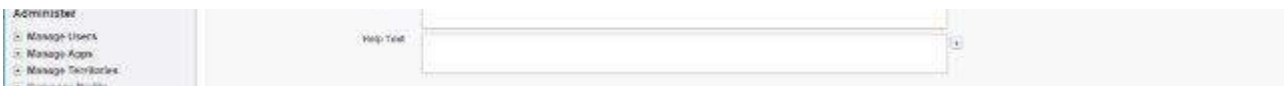


**Step 4:** Select data type as Text Area and then click on Next button.



**Step 5:** Enter information as given below:

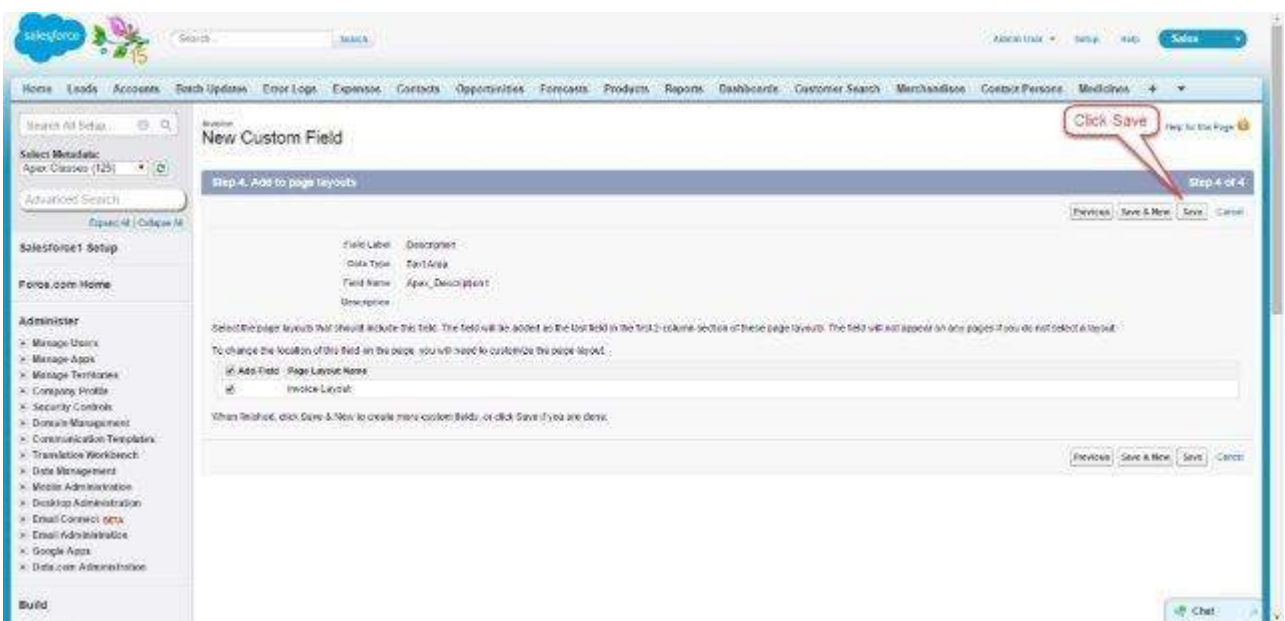




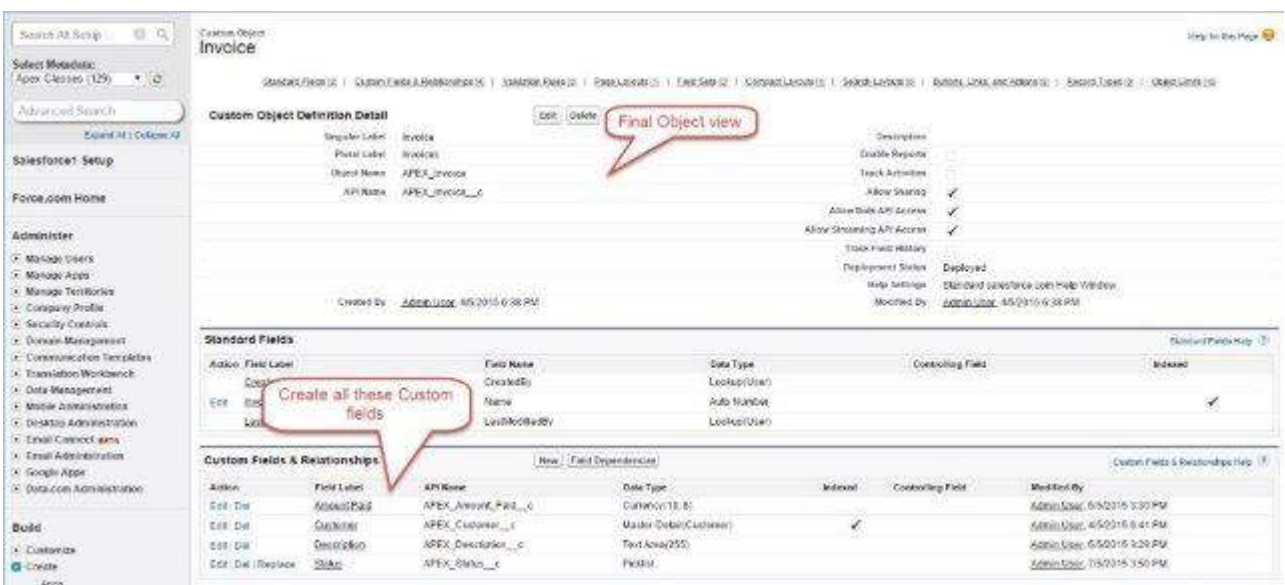
**Step 6:** Click on Visible and then next:



And then click on Save.



Similarly, you can create the other fields on the Invoice object.



By this, we have created the objects that are needed for following through the tutorial. We will be learning various examples in the further chapters based on these objects.