



APEX

tutorialspoint
SIMPLY EASY LEARNING

www.tutorialspoint.com



<https://www.facebook.com/tutorialspointindia>



<https://twitter.com/tutorialspoint>

About the Tutorial

Apex is a proprietary language developed by Salesforce.com. It is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API.

Audience

This tutorial is targeted for Salesforce programmers beginning to learn Apex. This will bring you to an Intermediate level of expertise in Apex programming covering all the important aspects of Apex with complete hands-on code experience.

Prerequisites

Basic knowledge of Salesforce platform and development is needed. Apex is a programming language which has to be used with Salesforce. This tutorial assumes that you already have set up the Salesforce instance which will be used to do our Apex programming.

Copyright & Disclaimer

© Copyright 2017 by Tutorials Point (I) Pvt. Ltd.

All the content and graphics published in this e-book are the property of Tutorials Point (I) Pvt. Ltd. The user of this e-book is prohibited to reuse, retain, copy, distribute or republish any contents or a part of contents of this e-book in any manner without written consent of the publisher.

We strive to update the contents of our website and tutorials as timely and as precisely as possible, however, the contents may contain inaccuracies or errors. Tutorials Point (I) Pvt. Ltd. provides no guarantee regarding the accuracy, timeliness or completeness of our website or its contents including this tutorial. If you discover any errors on our website or in this tutorial, please notify us at contact@tutorialspoint.com

Table of Contents

About the Tutorial.....	i
Audience	i
Prerequisites	i
Copyright & Disclaimer.....	i
Table of Contents	ii
 1. APEX – OVERVIEW	1
What is Apex?	1
Features of Apex as a Language	1
When Should Developer Choose Apex?.....	2
Flow of Actions.....	3
Understanding the Apex Syntax	3
 2. APEX – ENVIRONMENT.....	5
Executing Code in Developer Console	7
 3. APEX – EXAMPLE	10
Enterprise Application Development Example	10
Creating the Custom Fields for Customer object	12
Creating Invoice Object	15
Creating the Custom Fields for Invoice object	17
 4. APEX – DATA TYPES	21
Understanding the Data Types	21
Primitive Data Types	21
 5. APEX – VARIABLES	25
 6. APEX – STRINGS.....	27
String Methods	27

7. APEX – ARRAYS.....	30
8. APEX – CONSTANTS.....	32
9. APEX – DECISION MAKING.....	33
Apex - if statement.....	34
Apex – if else statement.....	35
Apex - elseif else statement	36
Apex – nested if statement	37
10. APEX – LOOPS.....	39
Apex – for Loop	40
Apex – SOQL for Loop.....	41
Apex – Java-like for Loop.....	43
Apex – While Loop	47
Apex – do-while Loop.....	48
11. APEX – COLLECTIONS	50
Lists.....	50
Methods for Lists	51
Sets	52
Methods for Sets.....	52
Maps	53
Methods for Maps.....	53
12. APEX – CLASSES	55
What is a Class?.....	55
Creating Classes	55
Apex Class Structure.....	57
Access Modifiers	57
Sharing Modes	58

Class Variables	58
13. APEX – METHODS.....	60
Class Methods.....	60
Access Modifiers for Class Methods	60
Class Constructors	61
Overloading Constructors.....	62
14. APEX – OBJECTS.....	64
Object Creation from Class.....	64
sObject creation.....	64
Static Initialization	65
15. APEX – INTERFACES	66
Standard Salesforce Interface for Batch Apex	67
16. APEX – DML.....	70
DML Statements.....	70
Insert Operation.....	70
Update Operation	71
Upsert Operation	72
Delete Operation	73
Undelete Operation	74
17. APEX – DATABASE METHODS	77
Differences between Database Methods and DML Statements.....	77
Insert Operation.....	77
Update Operation	78

18. APEX – SOSL	80
SOSL.....	80
SOQL	81
19. APEX – SOQL.....	82
SOQL Example	82
Traversing Relationship Fields	82
Fetching Child Records	83
Fetching Parent Record	84
Aggregate Functions.....	85
Binding Apex Variables	85
20. APEX – SECURITY	86
Data Security and Sharing Rules	86
With Sharing Keyword	86
Without Sharing Keyword	87
Setting Security for Apex Class	87
21. APEX – INVOKING	91
From Execute Anonymous Block	91
From Trigger.....	93
From Visualforce Page Controller Code	94
22. APEX – TRIGGERS.....	96
Trigger Example 1.....	96
Trigger Example 2.....	97
23. APEX – TRIGGER DESIGN PATTERNS	98
Bulk Triggers Design Patterns.....	98
Trigger Helper Class.....	99
Single Trigger on Each sObject.....	100

24. APEX – GOVERNOR LIMITS	102
What are Governor Limits?	102
Avoiding SOQL Query Limit	102
DML Bulk Calls.....	105
Other Salesforce Governor Limits.....	107
25. APEX – BATCH PROCESSING	108
What is Batch Apex?	108
Start	109
Execute	109
Finish.....	109
Batch Apex Example.....	110
Scheduling the Apex Batch Job using Apex Detail Page	112
Scheduling the Apex Batch Job using Schedulable Interface.....	113
26. APEX – DEBUGGING	115
Debugging via Developer Console	115
Debugging via Debug Logs.....	117
27. APEX – TESTING.....	123
Test Classes	123
Creating Test Class	124
Running the Test Class	126
28. APEX – DEPLOYMENT	128
What is Deployment in SFDC?	128
Deployment using Change Set.....	131

1. APEX – OVERVIEW

What is Apex?

Apex is a proprietary language developed by the Salesforce.com. As per the official definition, Apex is a strongly typed, object-oriented programming language that allows developers to execute the flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API.

It has a Java-like syntax and acts like database stored procedures. It enables the developers to add business logic to most system events, including button clicks, related record updates, and Visualforce **pages**.**Apex** code can be initiated by Web service requests and from triggers on objects. Apex is included in Performance Edition, Unlimited Edition, Enterprise Edition, and Developer Edition.



Features of Apex as a Language

Let us now discuss the features of Apex as a Language:

Integrated

Apex has built in support for DML operations like INSERT, UPDATE, DELETE and also DML Exception handling. It has support for inline SOQL and SOSL query handling which returns the set of sObject records. We will study the sObject, SOQL, SOSL in detail in future chapters.

Java like syntax and easy to use

Apex is easy to use as it uses the syntax like Java. For example, variable declaration, loop syntax and conditional statements.

Strongly Integrated with Data

Apex is data focused and designed to execute multiple queries and DML statements together. It issues multiple transaction statements on Database.

Strongly Typed

Apex is a strongly typed language. It uses direct reference to schema objects like sObject and any invalid reference quickly fails if it is deleted or if is of wrong data type.

Multitenant Environment

Apex runs in a multitenant environment. Consequently, the Apex runtime engine is designed to guard closely against runaway code, preventing it from monopolizing shared resources. Any code that violates limits fails with easy-to-understand error messages.

Upgrades Automatically

Apex is upgraded as part of Salesforce releases. We don't have to upgrade it manually.

Easy Testing

Apex provides built-in support for unit test creation and execution, including test results that indicate how much code is covered, and which parts of your code can be more efficient.

When Should Developer Choose Apex?

Apex should be used when we are not able to implement the complex business functionality using the pre-built and existing out of the box functionalities. Below are the cases where we need to use apex over Salesforce configuration.

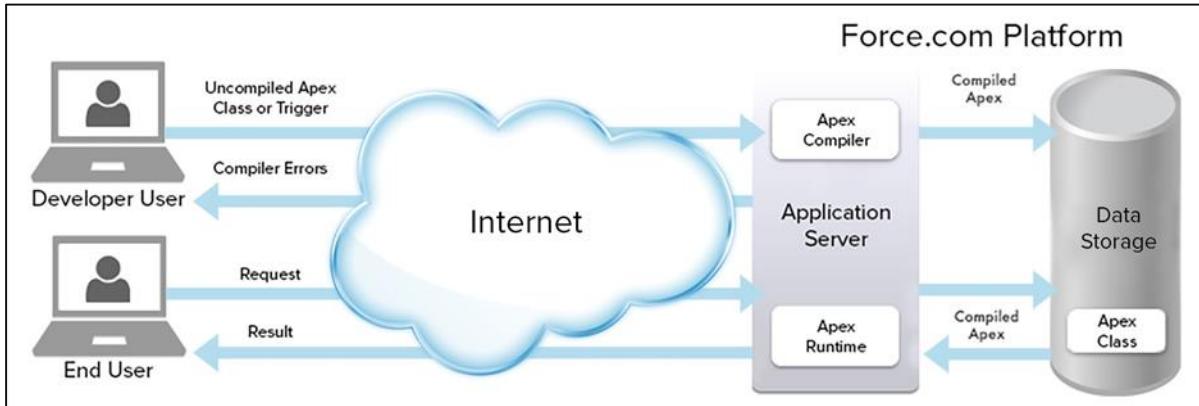
Apex Applications

We can use Apex when we want to:

- Create Web services with integrating other systems.
- Create email services for email blast or email setup.
- Perform complex validation over multiple objects at the same time and also custom validation implementation.
- Create complex business processes that are not supported by existing workflow functionality or flows.
- Create custom transactional logic (logic that occurs over the entire transaction, not just with a single record or object) like using the Database methods for updating the records.
- Perform some logic when a record is modified or modify the related object's record when there is some event which has caused the trigger to fire.

Working Structure of Apex

As shown in the diagram below (Reference: Salesforce Developer Documentation), Apex runs entirely on demand Force.com Platform:



Flow of Actions

There are two sequence of actions when the developer saves the code and when an end user performs some action which invokes the Apex code as shown below:

Developer Action

When a developer writes and saves Apex code to the platform, the platform application server first compiles the code into a set of instructions that can be understood by the Apex runtime interpreter, and then saves those instructions as metadata.

End User Action

When an end-user triggers the execution of Apex, by clicking a button or accessing a Visualforce page, the platform application server retrieves the compiled instructions from the metadata and sends them through the runtime interpreter before returning the result. The end-user observes no differences in execution time as compared to the standard application platform request.

Since Apex is the proprietary language of Salesforce.com, it does not support some features which a general programming language does. Following are a few features which Apex does not support:

- It cannot show the elements in User Interface.
- You cannot change the standard SFDC provided functionality and also it is not possible to prevent the standard functionality execution.
- Temporary file creation is not supported.
- Creating multiple threads is also not possible as we can do it in other languages.

Understanding the Apex Syntax

Apex code typically contains many things that we might be familiar with from other programming languages.

Variable Declaration

As strongly typed language, you must declare every variable with data type in Apex. As seen in the code below (screenshot below), lstAcc is declared with data type as List of Accounts.

SOQL Query

This will be used to fetch the data from Salesforce database. The query shown in screenshot below is fetching data from Account object.

Loop Statement

This loop statement is used for iterating over a list or iterating over a piece of code for a specified number of times. In the code shown in the screenshot below, iteration will be same as the number of records we have.

Flow Control Statement

The If statement is used for flow control in this code. Based on certain condition, it is decided whether to go for execution or to stop the execution of the particular piece of code. For example, in the code shown below, it is checking whether the list is empty or it contains records.

DML Statement

Performs the records insert, update, upsert, delete operation on the records in database. For example, the code given below helps in updating Accounts with new field value.

Following is an example of how an Apex code snippet will look like. We are going to study all these Apex programming concepts further in this tutorial.

```
1 public class MyFirstApexClass () {
2     List<Account> lstAcc = new List<Account>();
3     lstAcc = [SELECT id, Name, Description FROM Account WHERE Name LIKE '%test%'];
4     List<Account> lstAccountUpdated List<Account>();
5     for (Account objAcc: lstAcc) {
6         objAcc.Description = 'This Account for Testing';
7         lstAccountUpdated.add(objAcc); //updated accounts
8     }
9     if(lstAccountUpdated != null && lstAccountUpdated.size()>0) {
10        update lstAccountUpdated; //Perform DML
11    }
12 }
```

Variable Declaration

SOQL query

Loop Statement

Flow control statement

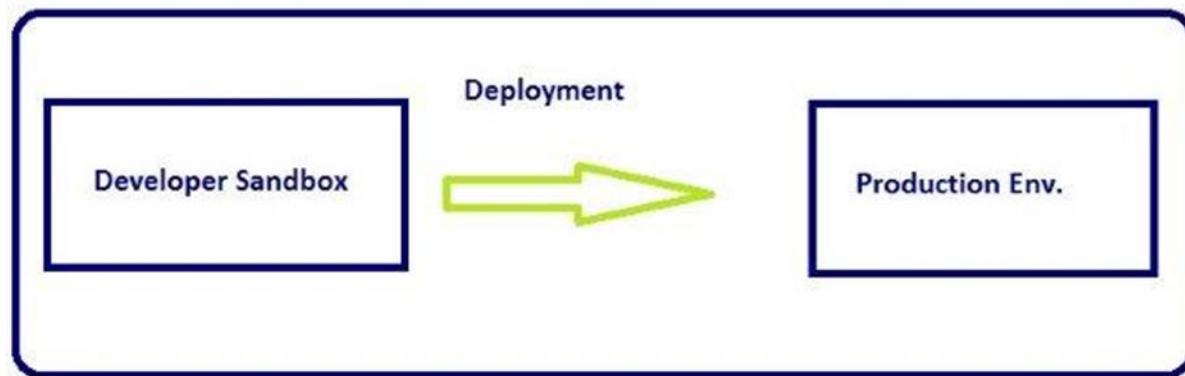
DML Statement

2. APEX – ENVIRONMENT

In this chapter, we will understand the environment for our Salesforce Apex development. It is assumed that you already have a Salesforce edition set up for doing Apex development.

You can develop the Apex code in either Sandbox or Developer edition of Salesforce. A Sandbox organization is a copy of your organization in which you can write code and test it without taking the risk of data modification or disturbing the normal functionality. As per the standard industrial practice, you have to develop the code in Sandbox and then deploy it to the Production environment.

For this tutorial, we will be using the Developer edition of Salesforce. In the Developer edition, you will not have the option of creating a Sandbox organization. The Sandbox features are available in other editions of Salesforce.



Apex Code Development Tools

In all the editions, we can use any of the following three tools to develop the code:

- Force.com Developer Console
- Force.com IDE
- Code Editor in the Salesforce User Interface

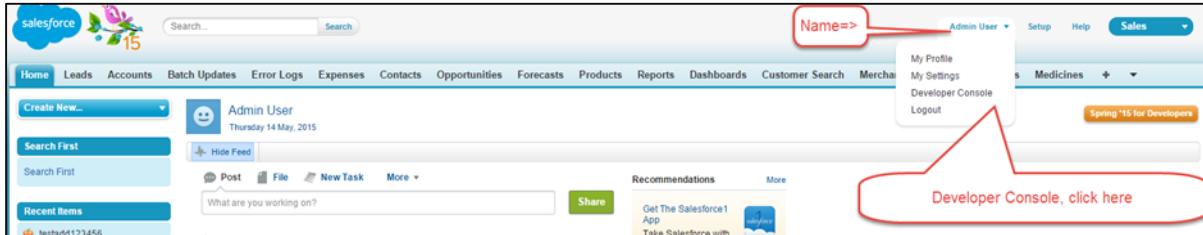
Note: We will be utilizing the Developer Console throughout our tutorial for code execution as it is simple and user friendly for learning.

Force.com Developer Console

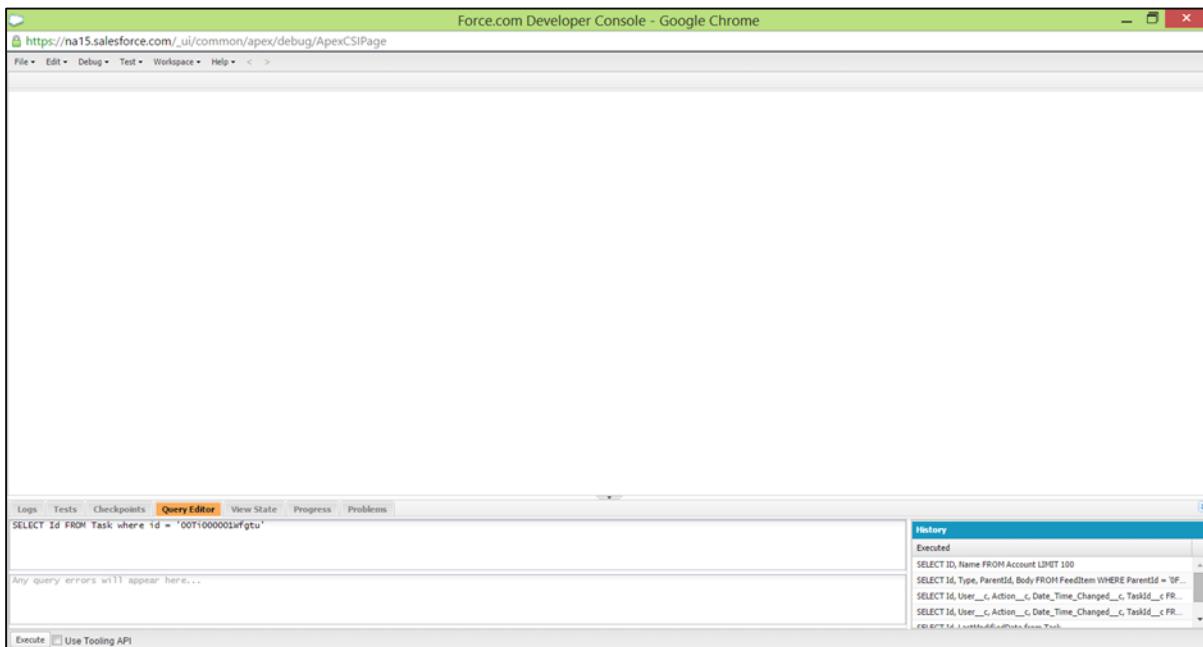
The Developer Console is an integrated development environment with a collection of tools you can use to create, debug, and test applications in your Salesforce organization.

Follow these steps to open the Developer Console:

Step 1: Go to Name->Developer Console



Step2: Click on "Developer Console" and a window will appear as in the following screenshot.



Following are a few operations that can be performed using the Developer Console.

- **Writing and compiling code** - You can write the code using the source code editor. When you save a trigger or class, the code is automatically compiled. Any compilation errors will be reported.
- **Debugging** - You can view debug logs and set checkpoints that aid in debugging.
- **Testing** - You can execute tests of specific test classes or all classes in your organization, and you can view test results. Also, you can inspect code coverage.
- **Checking performance** - You can inspect debug logs to locate performance bottlenecks.

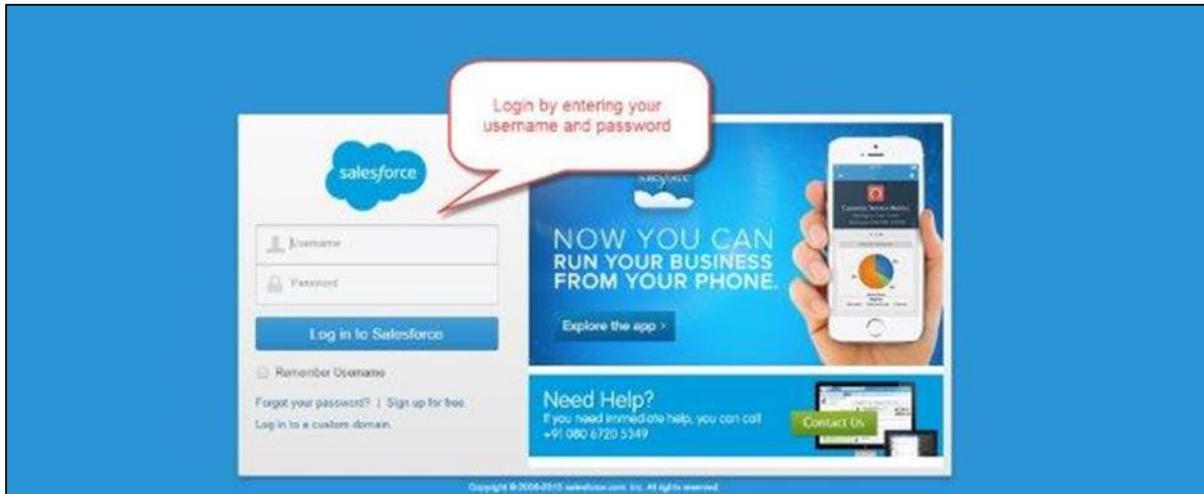
- **SOQL queries** - You can query data in your organization and view the results using the Query Editor.
- **Color coding and autocomplete** - The source code editor uses a color scheme for easier readability of code elements and provides auto completion for class and method names.

Executing Code in Developer Console

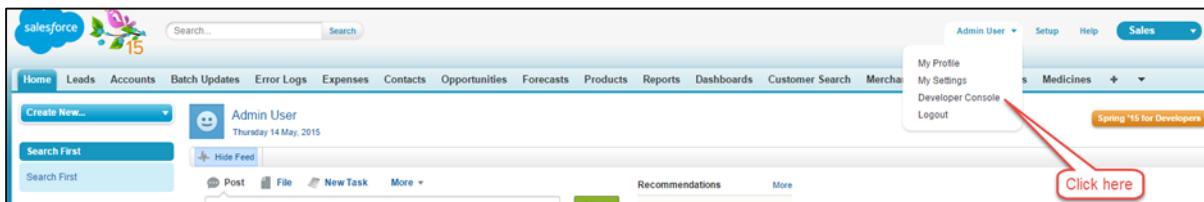
All the code snippets mentioned in this tutorial need to be executed in the developer console. Follow these steps to execute steps in Developer Console.

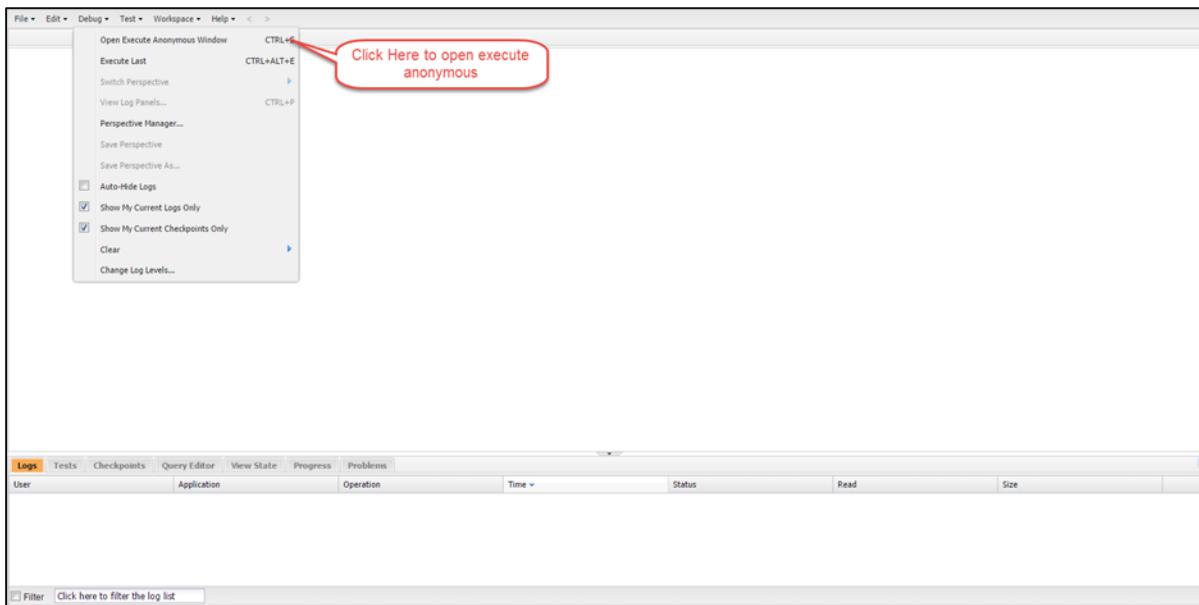
Step 1: Login to the Salesforce.com using **login.salesforce.com**. Copy the code snippets mentioned in the tutorial. For now, we will use the following sample code:

```
String myString = 'MyString';
System.debug('Value of String Variable'+myString);
```

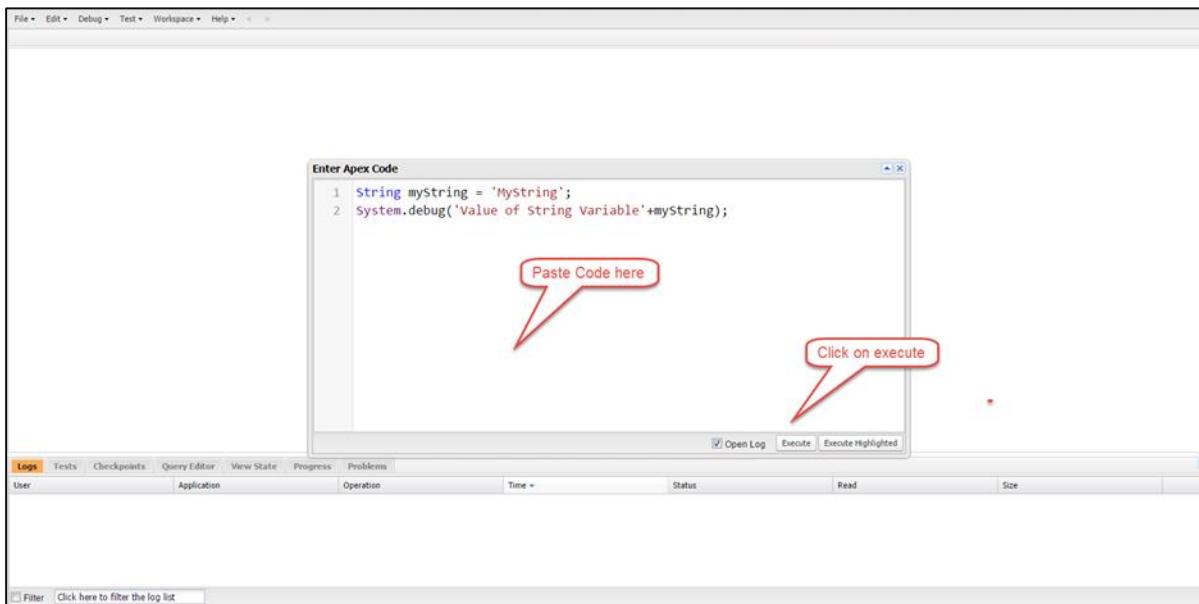


Step 2: To open the Developer Console, click on Name -> Developer Console and then click on Execute Anonymous as shown below.





Step 3: In this step, a window will appear and you can paste the code there.



Step 4: When we click on **Execute**, the debug logs will open. Once the log appears in window as shown below, then click on the log record:

```

11:15:47:039 EXECUTION_ST...
11:15:47:039 CODE_UNIT_ST...
11:15:47:040 SYSTEM_METHOD__ [2]System.debug(ANY)
11:15:47:040 USER_DEBUG [2]DEBUG[Value of String Variable&#039;String
11:15:47:040 SYSTEM_METHOD__ [2]System.debug(ANY)
11:15:47:040 CUMULATIVE_L...
11:15:47:040 LIMIT_USAGE_F... (default)
11:15:47:000 LIMIT_USAGE_F... Number of SOQL queries: 0 out of 100
11:15:47:000 LIMIT_USAGE_F... Number of query rows: 0 out of 50000
11:15:47:000 LIMIT_USAGE_F... Number of SOSL queries: 0 out of 20
11:15:47:000 LIMIT_USAGE_F... Number of DML statements: 0 out of 150
11:15:47:000 LIMIT_USAGE_F... Number of DML rows: 0 out of 10000
11:15:47:000 LIMIT_USAGE_F... Maximum CPU time: 0 out of 10000
11:15:47:000 LIMIT_USAGE_F... Maximum Heap size: 0 out of 6000000
11:15:47:000 LIMIT_USAGE_F... Number of callouts: 0 out of 100
11:15:47:000 LIMIT_USAGE_F... Number of Email Invocations: 0 out of 10
11:15:47:000 LIMIT_USAGE_F... Number of future calls: 0 out of 50
11:15:47:000 LIMIT_USAGE_F... Number of queueable jobs added to the queue: 0 out of 50
11:15:47:000 LIMIT_USAGE_F... Number of Mobile Apex push calls: 0 out of 10
11:15:47:000 LIMIT_USAGE_F...
11:15:47:040 CUMULATIVE_L...
11:15:47:040 CODE_UNIT_F... execute_anonymous_apex

```

This Frame Executable Debug Only Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Admin User	0000000000001007	/services/data/v33.0/tooling/executeAn...	6/4/2015, 11:15:47 AM	Success		1.27 KB
Admin User	0000000000001007	/services/data/v33.0/tooling/executeAn...	6/4/2015, 11:14:59 AM	Success		1.27 KB

Always click on the first log as it is latest

Then type 'USER' in the window as shown below and the output statement will appear in the debug window. This 'USER' statement is used for filtering the output.

File Edit Debug Test Workspace Help < >

Log executeAnonymous @5/8/2015, 5:03:11 PM

Execution Log

Timestamp	Event	Details
17:03:11:042	USER_DEBUG	[2]DEBUG[Value of String Variable'String

Output of Debug Statement, value of String variable

Enter here a String as 'USER' to see the output

This Frame Executable Debug Only Filter: USER

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Admin User	0000000000001007	/services/data/v33.0/tooling/executeAn...	5/8/2015, 5:03:11 PM	Success		1.27 KB

Filter Click here to filter the log list

So basically, you will be following all the above mentioned steps to execute any code snippet in this tutorial.

3. 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 in detail.

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 steps given below. 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:

This screenshot shows the Salesforce Home page. At the top, there's a navigation bar with links like Home, Leads, Accounts, etc. On the far right of the bar, there are buttons for Admin User, Setup, Help, Sales, and a red box labeled 'Click Here'. Below the bar, there's a feed of recent activity. On the left, there's a sidebar with sections for Create New..., Search First, Recent Items, and a list of recent records including Test, INV-0024, INV-0023, INV-0011, Test9, Test8, and Test7. The main area has a search bar at the top and a 'What are you working on?' input field. To the right, there are 'Recommendations' and a 'Share' button.

This screenshot shows the Salesforce Setup page. At the top, there's a search bar with a red box around it labeled 'Search 'Object' here'. Below the search bar, there's a sidebar with sections for Administer, Build, and Develop. Under the Build section, there's a 'Create' section with a 'Customer Object' link, which is also highlighted with a red box and a callout 'Once searched, click here'. The main content area shows a 'Getting Started' section with a 'Build App' button and a 'System Overview' section with a warning message. There's also a 'Recent Items' list and a 'Help for this Page' link.

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. At the top right, there is a red box with the text 'Click on this button' pointing to the 'New Custom Object' button. The page lists various custom objects with columns for Action, Label, Master Object, Deployed, and Description.

Action	Label	Master Object	Deployed	Description
Edit Del	AddressInformation		✓	Stores the address information for countries and states along with region
Edit Del	AsyncRequest		✓	Async Request object
Edit Del	BatchUpdate		✓	
Edit Del	Campaign		✓	
Edit Del	ContactPerson		✓	
Edit Del	Customer		✓	
Edit Del	DebugInfo		✓	
Edit Del	DynamicPicklist		✓	
Edit Del	ErrorLog		✓	Keep records about error
Edit Del	EventFieldHistoryTracker		✓	
Edit Del	ExpenseMedicine	ExpenseTable_Medicine	✓	

Step 3: After clicking on button, the 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 the screenshot below and keep other default things as it is.

The screenshot shows the 'New Custom Object' creation page. At the top right, there is a red box with the text 'New Object page' pointing to the 'Save & New' button. The page has sections for 'Custom Object Information', 'Enter Record Name Label and Format', and includes fields for Label, Plural Label, Object Name, Description, and Context-Sensitive Help Setting.

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

Custom Object Definition Edit

Custom Object Information

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

Label: Customer Example: Account
Plural Label: Customers Example: Accounts

Starts with vowel sound:

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

Object Name: APEX_Customer Example: Account

Description:

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

Content 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: Customer Name Example: Account Name

Data Type: Text

Optional Features

By following the 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 can 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.

Home Leads Accounts Batch Updates Error Logs Expenses Contacts Opportunities Forecasts Products Reports Dashboards Customer Search Merchandises Contact Persons Medicines +

Create New... Admin User Thursday 4 June, 2015

Search First

Recent Items

Test INV-0024 INV-0023 INV-0022 INV-0011 Test Test9 Test8 Test7

Post File New Task More What are you working on? Share Recommendations More Get The Salesforce 1 App Take Salesforce with you everywhere! Download the new Salesforce1 Mobile App from the Apple App Store and Google Play Skip >

Expense Manager Shares interest in 2 records Follow

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

The screenshot shows the Salesforce Home page. At the top, there is a search bar with the placeholder "Search 'Object' here". Below the search bar is a navigation menu with various tabs like Home, Leads, Accounts, etc. On the left, there is a sidebar with sections for Administrator, Build, and Develop. Under the Build section, there is a "Create Objects" button. A red box highlights the search bar with the text "Search 'Object' here". Another red box highlights the "Create Objects" button with the text "Once searched, click here".

Step 3: Click on object 'Customer':

The screenshot shows the Force.com API page. It lists various objects such as Address Information, Case, Contact, Customer, DebugInfo, DynamicChecklist, Error Log, and EventFieldHistoryTracker. A red box highlights the "Customer" object with the text "Click on Customer Object".

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

The screenshot shows the Customer object detail page. It has two main sections: "Standard Fields" and "Custom Fields & Relationships". In the "Standard Fields" section, there are fields for Action, Field Label, API Name, Data Type, Controlling Field, and Modified By. One of the fields, "Customer Name", is highlighted with a red box and the text "Click here to create a new field". In the "Custom Fields & Relationships" section, there are several rows of data with columns for Action, Field Label, API Name, Data Type, Indexed, Controlling Field, and Modified By. A red box highlights the "New" button at the bottom of this section.

Step 5: Now, select the data type as Checkbox and click Next:

The screenshot shows the 'Data Type selection' step in the Salesforce setup. On the left, a sidebar lists various objects like Company Profile, Security Controls, etc. The main area shows a list of data types: Roll-Up Summary, Lookup Relationship, Master-Detail Relationship, External Look-up Relationship, Checkbox (selected), Currency, Date, Date/Time, Email, Geolocation, Number, and Percent. A red arrow points from the text 'Data Type selection' to the 'Checkbox' option.

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

The screenshot shows the 'Step 2. Enter the details' screen. It has fields for 'Field Label' (set to 'Active'), 'Default Value' (radio button for 'Checked' is selected), 'Field Name' (set to 'APEX_Active'), 'Description' (empty), and 'Help Text' (empty). A red callout bubble says 'Enter the field label as well as Field Name as shown and click next'. A red arrow points from this callout to the 'Field Name' field.

Step 7: Click on Visible and then click Next:

The screenshot shows the 'Step 3. Establish field-level security' screen. It displays the previously entered field details: Field Label 'Active', Data Type 'Checkbox', Field Name 'APEX_Active', and Description. Below this, it says '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.' A table lists profiles: Contract Manager, Cross Org Data Proxy User, Custom: Marketing Profile, Custom: Sales Profile, and Custom: Support Profile. For each profile, there are two checkboxes: 'Visible' (checked) and 'Read-Only' (unchecked). A red callout bubble says 'Click on Visible and then next' and points to the 'Visible' checkbox for the 'Contract Manager' profile.

Step 8: Now click on 'Save'.

Customer
New Custom Field

Step 4. Add to page layouts

Field Label: Active
Data Type: Checkbox
Field Name: APEX_Active__c
Description:

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages 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
 Customer Layout

Step 4 of 4

Previous Save & New Save Cancel

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

Custom Object
Customer

Standard Fields | Custom Fields & Relationships | Validation Rules | Page Layouts | Field Sets | Compact Layouts | Search Layouts | Buttons, Links, and Actions | Record Types | Apex Sharing Reasons | Apex Sharing Recalculation | Object Limits

Custom Object Definition Detail

Singular Label: Customer
Plural Label: Customers
Object Name: APEX_Customer
API Name: APEX_Customer__c

Description
Enable Reports
Track Activities
Allow Sharing
Allow Bulk API Access
Allow Streaming API Access
Track Field History
Deployment Status: Deployed
Help Settings: Standard salesforce.com Help Window
Modified By: Admin User, 5/5/2015 3:34 PM

Created By: Admin User, 4/5/2015 6:39 PM

Standard Fields

Action	Field Label	Field Name	Data Type	Controlling Field	Indexed
Edit	Created By	CreatedBy	Lookup(User)		✓
Edit	Custom Last	CustomLast	Lookup(User)		✓
Edit	Owner	OwnedBy	Lookup(User.Queue)		✓

Custom Fields & Relationships

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By
Edit Del	Active	APEX_Active__c	Checkbox			Admin User, 7/5/2015 12:20 AM
Edit Del	Customer Description	APEX_Customer_Description__c	Text(255)			Admin User, 7/5/2015 12:15 AM
Edit Del	Customer Description	Customer_Description__c	Lookup(Customer)	✓		Admin User, 12/5/2015 3:43 PM
Edit Del	Customer Description	APEX_Customer_Description__c	Text(255)			Admin User, 7/5/2015 2:28 PM
Edit Del Replace	Customer Status	APEX_Customer_Status__c	Picklist			Admin User, 7/5/2015 3:04 PM
Edit Del	External Id	APEX_External_Id__c	Text(20) (External ID)	✓		Admin User, 21/5/2015 2:38 PM

Final View of Customer Object

Creating Invoice Object

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

salesforce 15

Home Leads Accounts Batch Updates Error Logs Expenses Contacts Opportunities Forecasts Products Reports Dashboards Customer Search Merchandises Contact Persons Medicines +

Create New... Admin User Thursday 4 June, 2015

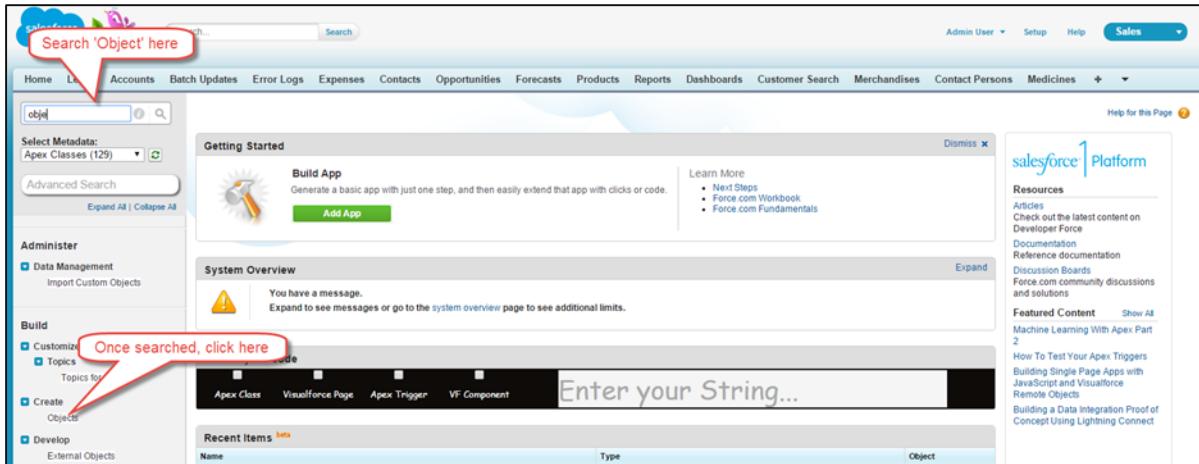
Search First Hide Feed Post File New Task More

Recent Items Test INV-0024 INV-0023 INV-0011 Test Test9 Test8 Test7

What are you working on? Share

Get the Salesforce 1 App Take Salesforce with you everywhere! Download the new Salesforce 1 Mobile App from the Apple App Store and Google Play.

Expense Manager Shares interest in 2 records Follow



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

Custom Objects				
Custom objects are database tables that allow you to store data specific to your organization in salesforce.com. You can use custom objects to extend salesforce.com functionality or to build new application functionality.				
Once you have created a custom object, you can create a custom tab, custom related lists, reports, and dashboards for users to interact with the custom object data. You can also access custom object data through the Force.com API.				
Action	Label	Master Object	Deployed	Description
Edit Del	Address Information		✓	Stores the address information for countries and states along with region
Edit Del	AsyncRequest		✓	Async Request object
Edit Del	Batch Update		✓	
Edit Del	Composite		✓	
Edit Del	Contact Person		✓	
Edit Del	Customer		✓	
Edit Del	DebugInfo		✓	
Edit Del	DynamicPicklist		✓	
Edit Del	Error Log		✓	Keep records about error
Edit Del	Event Field History Tracker		✓	
Edit Del	Expense Medicine	Expense Table, Medicine	✓	

Step 3: After clicking on the button, the new object creation page will appear as shown in the screenshot below. You need to enter the details here. The object name should be Invoice. This is similar to how we created the Customer object earlier in this tutorial.

New Custom Object

Help for this Page

Permissions for this object are disabled for all profiles by default. You can enable object permissions in permission sets or by editing custom profiles. Tell me more... Read about this message again

Custom Object Definition Edit

Save Save & New Cancel

Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label Example: Account

Plural Label Example: Accounts

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

Content 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

New Object page

End of ebook preview
If you liked what you saw...
Buy it from our store @ <https://store.tutorialspoint.com>