



Salesforce Administrator + Development

Upon completing this course, you should be able to:

- Explain Cloud Computing, Salesforce as CRM, SAAS, PAAS, IAAS models.
- Hands-on and working knowledge of Salesforce as a platform.
- Explain the Permissions and Sharing Model of Salesforce.
- Build your own Applications in Salesforce using the Lightning Record, Home, App Page and others.
- Salesforce Automation tools - Workflows, Process Builder, Flows, Approval process and others.
- Build your own Reports and Dashboards, and even custom reports.
- Understand the end-to-end flow of the applications in Salesforce by building 3 amazing projects.
- Implement your own Custom Logic
- Write complex SOQL and SOSL Queries
- Explain what is Asynchronous Apex
- Implement your own Future, Queueable and Batchable classes
- Handle exceptions in Apex
- Write your own Apex Test Classes for 100% code coverage.
- Apex Limits class to handle Governor limits
- Deploy your code using- Using Change set, Using Workbench, Using VS Code
- Integrate Salesforce with any 3rd party application using REST API
- Expose web services from Salesforce to any 3rd party application
- Build Real-time projects

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From Sun Space Cloud Technologies..

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Introduction: Cloud Computing/SFDC

Goal:

To understand the cloud computing model, and concepts like SAAS, PAAS and IAAS. Get to know what exactly is Salesforce, and why it's the #1 CRM system in the world.

Objectives:

Upon completing this module, you should be able to:

- Explain Cloud Computing
- List the advantages/disadvantages of Cloud Computing with other computing models.
- Define SAAS, PAAS, IAAS – Service Model
- Explain what is Salesforce as CRM.
- Define what is Multi-Tenant Architecture and basics of Metadata architecture of Salesforce
- List the benefits of working with Salesforce system as a customer and as a working professional.

Topics:

- Cloud Computing - Introduction
- Cloud Computing - Architecture
- Cloud Computing - Security Model
- CRM - Introduction

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- Salesforce as CRM
- Salesforce - SaaS/PaaS
- Campaign, Leads, Accounts, Contacts • Why use Salesforce ?

Hands-On/Assignments

- Sign up and Create your own Salesforce Org: <https://developer.salesforce.com/signup>
- Sign up on the best platform to learn Salesforce - Trailhead: <https://trailhead.salesforce.com/>

Salesforce Overview and Setup

Topics:

- Different Approaches - Declarative & Programmatic Approach
- Setup the Org
- Different Salesforce Editions
- User Licences
- Users, Profiles, Roles

Hands-on

Create users in Salesforce

Create custom Roles and Profiles for new users.

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Assignments

Salesforce Platform Basics:

https://trailhead.salesforce.com/en/content/learn/modules/lex_salesforce_basics Salesforce User Basics:

https://trailhead.salesforce.com/content/learn/modules/lex_salesforce_basics

Objects in Salesforce

Topics:

- Standard vs Custom Object differences
- Types of Fields, Controlling/ Dependent Picklist/ Global Picklist
- Type of Relationships - Master detail, Lookup, Hierarchy etc.
- Explore Schema Builder
- Create Objects/fields from Spreadsheet directly!
- Rollup summary fields
- Formula Fields
- Page layouts
- Record type
- Validation Rules

Hands-on

- Understand our first Real-time sample project.

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- Create objects for different entities.
- Understand and create different fields and relationships.
- Create Objects, fields and relationships for our project.
- Create new record types for the storing different types of records for same objects.
- Build new Page Layouts for storing the records
- Using Page Layout Assignment, assign the correct Page Layout to the record types.

Permissions and Sharing Model

Topics:

- Profile
- Roles
- Permission Set
- Permission Set Groups
- Permission Set Licences/Assignments
- Org Wide Default

Hands-on

- Create custom Profile, Roles and Role Hierarchy
- Create custom permission sets and associate them in one group.
- Assign correct Salesforce License to the Permission sets.

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- Configure the Org Wide default settings.

Sharing of Records

Topics:

- Public Group - Setup and why its important
- Sharing Settings and Rules
- Manual Sharing

Hands-on

- Create Public Groups
- Create Sharing Rules for Private and Read-Only custom objects
- Manually Share the records with your peers

UI Aspects

Topics:

- Apps
- Lightning Pages
- Compact Layouts
- Search Layouts

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- List Views
- Dynamic Forms in Salesforce
- Analyze your Lightning page speed and its Optimization.

Hands-on

- Create your own Apps, create a custom app for the project.
- Create List Views and compact layouts for your team.
- Configure search layouts.

Automate the Mundane

Topics:

- Workflow Rule
- Process Builder
- Future is Flows
- Approval Process
- Auto Response Rules
- Escalation Rules
- Queues
- Assignment Rules

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Hands-On

- Create a workflow process and add actions.
- Create a Process Builder to understand how it is better than Workflows.
- Understand their shortcomings by create workflows and process builder
- Create different types of Flows in Salesforce
- Create flows for our sample practice project based on the specified requirements.
- Understand how debugging in flows work.
- To understand how the flows are better than Workflow and process builder.

Reports and Dashboards - Mobile Ready

Topics:

- Reports
- Bucket Fields
- Report Scheduling and Subscribing
- Dashboards
- Sharing Model of Reports and Dashboard
- Salesforce1 Mobile App

Hands-On

- Create Reports for the Real-time projects
- Understand how to add fields, filter criterias and share reports with your peers

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- Create Dashboards
- Add your reports to the dashboards
- Visualize your data using beautiful pictograms provided by Salesforce
- Add your reports, dashboards to the Lightning Pages
- Schedule and subscribe to reports

Dealing with Data:

- Data loader
- Data Import Wizard
- Difference between Data loader and Data Import Wizard
- Data Export
- Insert, Update, Delete, Purge from Workbench
- Considerations and things to take care when dealing with Data

Hands-On

- Import data from CSV file via Data Loader, Data Import wizard
- Perform different operations on your data
- Insert, Update, Delete, Purge, Export, Undelete Data using the different tools

Deployment Activities:

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Topics:

- Deploy your changes through Change Sets • Deploy using Workbench.

Hands-On

- Sign-up for 30 day free Trial Salesforce Org
- Setup Sandboxes and other environments
- Deploy your changes to this newly created orgs
- Using change sets deploy metadata in between Production and Sandbox orgs.

Real-time Projects

- Project 1 - Recruitment Management App

Order of execution

Salesforce Development Course Content

Upon completing this course, you should be able to:

- Implement your own Custom Logic
- Write complex SOQL and SOSL Queries
- Explain what is Asynchronous Apex
- Implement your own Future, Queueable and Batchable classes
- Handle exceptions in Apex

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- Write your own Apex Test Classes for 100% code coverage.
- Apex Limits class to handle Governor limits
- Deploy your code using- Using Change set, Using Workbench, Using VS Code
- Integrate Salesforce with any 3rd party application using REST API
- Expose web services from Salesforce to any 3rd party application
- Build Real-time projects

Introduction to Apex

Topics:

- Variable
- Data types - Primitive and Non - Primitive
- Arrays, List, Set, Maps
- For Loops
- If - Else Condition
- OOP Concepts in Apex
- Access Specifiers in Apex
- Parameterised & Non - Parameterised Functions
- Different Return types of Functions

Hands-on

- Write 10 simple programs in Apex
- Understand how to use Developer Console to write Apex.

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Query Language

Topics:

- SOQL and SOSL Queries
- Dynamic SOQL Queries
- Nested Queries
- Traversing Relationship Fields
- Aggregate Queries (GROUP BY)
- Improving Performance of SOQL
- Bind Expressions
- Writing SOQL and SOSL Queries in Apex

Hands-On

- Fetching Parent records from child using SOQL Queries
- Fetching Child record from Parents to Parent using SOQL Queries
- Write 7-8 programs involving SOQL, SOSL and Dynamic Queries
- Fetch Data from Recycle Bin



Apex Triggers

Topics

- Before Apex Triggers
- After Apex Triggers
- Trigger order of Execution
- Exception Handling In Apex
- Using Custom Metadata in Apex

Hands-On

- Writing Apex Triggers for Real-Time scenarios
- Make Perfect trigger - For all events - Insert, Update, Delete, Undelete
- Use methods and handler classes to segregate the logic from Trigger
- Writing 12-14 Apex Triggers - Before, After Context

Asynchronous Apex:

Topics:

- Apex Annotations (@InvocableMethod) - Call Apex Action from Flows, Process Builder
- Async Apex : @future, Queueable, Batchable Classes
- Schedulable Apex

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Hands-On 41

- Differentiate between Future, Queueable, Batchable by implementing them.
- Make callouts from Async Apex
- Schedule Batches using CRON expressions
- Understand the governor limits for Async Apex by implementing them.
- Understand why to use Async process always for callouts.

Apex Test Classes:

- Test Classes/Cases
- Annotations: @isTest, @startTest, @stopTest,
- Ensure 100% code coverage
- With Sharing and Without sharing Apex Classes

Hands-On 41

- Write Test classes for all the Apex Classes and Apex triggers created till now.
- Follow best practices while writing Test Classes
- Write test classes for both: positive and negative scenarios.
- Make use of @testData, @startTest and @stopTest



Bonus ⚡

Apex Limits class to handle Governor limits

Hands-On 🛠️

- Use limits class in your code to take care of governor limits
- Write code taking into consideration the governor limits

Deploy Metadata:

Topics:

- Using Workbench
- Using VS Code
- Using ANT Migration Tool

Hands-On 🛠️

- Creating package.xml file
- Retrieving metadata of your org
- Deploying the metadata to different org using different methods
- Quickly fetch metadata using extensions.
- Setup your development environment in Visual Studio code using SFDX.

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- Deploy/retrieve directly from Visual Studio code
- Follow best practices while deploying/retrieving the metadata.

Salesforce Integration:

Topics:

- Connected Apps - What are they, how to use
- Exposing Web Services
- Integration using REST API

Hands-On

- Setup Salesforce integration with Postman
- Setup Integration between two Salesforce Orgs
- Setup Inbound Integration and Outbound Integration from Salesforce using REST API

Road to Perfect Code:

- Coding Sessions
- Mock Interviews

Real-Time Projects

- Real time project Scenarios - Project 1

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- Real time project Scenarios - Project 2

Aura Component

- Aura Component Framework
- Simple Hello world component example
- Component Bundle
- Component Library
- Attributes in Aura Component
- Layouts
- Handling Browser Events
- Aura Id
- Access Attributes in JavaScript
- Bound and Unbound Expressions
- Component LifeCycle
- Helper File
- Applying Styles to Aura
- Loops in Aura
- Composition and Public Attributes
- Calling Apex Class in Aura Component
- Component Event
- Application Events
- Aura Method
- Static Resource
- Aura if
- Dynamic Forms
- LDS

Some Hands on Challenges for the Aura Component



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1. Create an Aura Component named CTHHealthAdmin .Add SLDS page Header and Change the Name title to "Contact Tracking" .Change the title to "Personal View" .Add the "Add new action button.Should have green,yellow ,orange ,red
Add the following vertical tabs to the left of the component

Personal view

Health view

2. Create the Lightning data table to display the total Contact records on the Contact Record Page

3. Create the Lightning data table to display the related contact records for the parent Account