BAJAJ FINSERV

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Services and Platform Salesforce with Java

Duration - 28 Days

Header	Description
Course Objective	▪ Understand Java language basics ▪ Understand the Object Model and Object-Oriented Programming ▪ Understand and use classes, inheritance, polymorphism ▪ Understand and use functional interfaces ▪ Learn good Java coding style & Create well-structured Java programs ▪ Introduction to Salesforce CRM tool ▪ Learning of Editions and options ▪ Understanding the Project Life Cycle ▪ Learn about advancement and Fields creation ▪ Validation Rule for Stock convenience ▪ Creating New User and active inactive freeze ▪ Login access to system admin ▪ Learn about Organization-Wide Defaults ▪ Learn ways that to do debugging, knowledge validation and security
Pre-Requisites	▪ HTML/CSS/JavaScript
Lab Setup	▪ MS Office ▪ Notepad++ - https://notepad-plus-plus.org/downloads/ ▪ Dataloader.io (Free) - https://dataloader.io/pricing ▪ VS code - https://code.visualstudio.com/download ▪ Access to salesforce.com

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Detailed Syllabus

1. Core Java - 5 Days

- Controlling Program Flow
  - If-else for loop
  - While loop
  - Do-while loop
  - Switch statement

- Objects in Java
  - Class Structure
  - JVM Architecture
  - How JVM works
  - Role of class loaders
  - Class loading
  - References
  - Primitives
  - Instance, static and local variables
  - Arrays
  - Command Line args
  - Packages and libraries in Java
  - JavaDocs

- Initialization & Cleanup
  - Constructors
  - Local variables
  - Data members
  - Garbage collection

- Method overloading
- This ()

■ Reusing Classes
- Composition
- Inheritance
- Initialization
- Super ()
- Final

■ Polymorphism
- Extensibility
- Up casting
- Overriding
- Abstract classes and methods
- Polymorphism

■ Interfaces and Inner Classes
- Abstract Classes
- Interfaces

■ Error/Exception Handling
- Introduction to Exception and Errors
- Create a try Block and catch Block
- Catch Multiple Exception Errors
- Create a finally Block
- Runtime exceptions and non-Runtime Exceptions implication on overriding
- Try with Resource and Improved Exception Handling

■ Generics
- Why use generics
- Generic Types, raw types
- Generic methods
- Collections
  ■ ArrayList
  ■ HashMap
  ■ TreeMap
  ■ TreeSet
  ■ HashTable
  ■ Arrays class
- Iterators
- Sorting using Comparable and Comparator
- Choosing best collection
- Hashing functions
- Equals method

- Performance of Different Collection Classes
- Resource class

- Working with Databases
  - Introduction to JDBC
  - Types of Drivers in JDBC
  - Connect to Database
  - Create a prepared Statement
  - Using a Parameters in a Prepared Statement
  - Creating and Retrieving Data from a Result Set
  - Format Data for Display
  - Position the Cursor in the Result Set
  - CRUD Operations
  - Make a Batch Update
  - Connection Pooling

- Integration
  - Introduction to Spring and Spring Boot
  - Advantages of Spring and developing Spring application
  - Spring MVC and DI concepts
  - Introduction to spring boot
  - Developing REST controller
  - Creating client to consume REST API

2. SFDC Administration - 5 Days

- Introduction to CRM
  - Why CRM?
  - Introduction to Cloud Computing & Salesforce.com
  - Cloud Computing - Overview
  - What is Software-as-a-Service (SAAS)?
  - What is Platform-as-a-Service (PAAS)?
  - What is Infrastructure-as-a-Service (IAAS)?

- What is Salesforce.com?
  - Salesforce.com CRM Editions
  - Salesforce Architecture – Cloud Computing is a Better Model Multi-tenant
  - Salesforce Editions / Pricing

- Salesforce.com Navigation - Overview
  - Salesforce Certifications
  - Certified Force.com Developer(401)
  - Certified Administration (201)
  - Certified Advanced Force.com Developer(501), etc.,

- Database Introduction
  - Database Model - Object Creation
  - Salesforce Building Blocks
  - Standard Objects
  - Create custom Objects
  - CRM functionality in Salesforce and use of standard objects
  - Custom Objects Vs. Standard Objects
  - Create custom Fields
  - Create custom Tabs

- Types of Tab
  - Standard Objects – Account, Contacts, Leads, Campaigns, Opportunities etc.,
  - Custom object Tabs
  - Web Tabs
  - Visual force Tabs

- Custom Application
  - Limitations
  - Field Creation and its Relationships

- Different Data types
  - Standard Data types
    - Text, Email, Number, Currency, URL, Text Area.
    - Storage Limitations
  - Read only Data types
    - Auto Number, Formula and Rollup summary
    - Rollup summary Operations
    - Sum (), Min (), Max () and Count

- Relational Data types
  - Lookup Vs. Master - Detail Relationship
  - Limitations
  - Required, External Id, Default Value and Unique fields

- Salesforce Application elements
  - Home Page, Tabs, Tab Home Pages, Detail Page, Side Bar, Apps, Record

- Page Layouts
  - Defining Page layouts
  - Field order changes
  - Adding custom buttons and links
  - Defining required and read only fields
  - Adding related list

- Record Types
  - To create and maintain record types for your organization.

- Display different page layouts and picklist values based on record types.
- Uses of Record Types

- Field Dependencies
  - Controlling field/Dependent field?
  - Making dependent pick list fields
  - Limitations

- Validation Rules
  - Defining Salesforce Data Validation
  - Creating Custom Validation Rules
  - Validation Vs. Trigger

- Workflow rules
  - Define workflow
  - Create Email template
  - Set up workflow rules
  - Set up workflow actions

- Workflow Approval process
  - Plan approvals using workflow
  - Use the approval wizard – standard vs. jump start
  - Create workflow approvals

- Email Templates
  - Email Templates – Sending Single emails and Mass emails.
  - Types of Templates - HTML (Using Letter Head) , Custom HTML (without using letter head), Visual force Email Templates

- Data Management
  - Import Wizard Vs Data Loader
  - Importing Overview
  - Exporting Overview
  - Import custom object records using the Data Loader
  - Use mass delete
  - Use storage

- Personal Setup
  - Managing Personal Information
  - Password Reset
  - User Management Overview
  - Roles, Users, Profiles & Sharing

- Users, Roles and Profiles
  - Creating Users
  - User Licenses Overview

- Understanding Record Ownership and Access
- Role Hierarchy
- Profiles
  - Overview and different profiles
  - User Permissions

- Security
  - Managing the Users
  - Set Organization Wide Defaults (OWD)
  - Object-level Security
  - Field-level Security
  - Record-level Security
  - Sharing Rules
    - Define Sharing rules
    - Discuss about types of sharing rules

- Reports & Dashboards

- AppExchange
  - Installing an App
  - Uninstalling an App

3. SFDC Development - 5 Days

- MVC Architecture
  - Model
  - View
  - Controller

- Apex Programming Overview
  - CSS Introduction

- JavaScript Introduction
  - Internal
  - External

- Static Resources
  - Adding External CSS files to the static resources · <apex: stylesheet/>
  - Adding External Javascript files to the static resources · <apex:includescript/>

- Apex Class Creation - Calling
  - Defining Class
  - Access Specifiers
  - Method Declarations
  - Debugging results

- Naming conventions & Code Commenting

- Data Types
  - Primitives
  - Collections (List, Set and Map)
  - sObject

- Controllers
  - Standard Controller
    - Record setvar
  - Custom Controller
    - SOQL Query – Query data with SOQL and place them on Pages
    - Custom Save Functionality
    - With Sharing class Vs. without Sharing Class
    - User mode Execution Vs. System mode Execution

- Extensions
  - Save - Standard controller with extension sample

- Development Tools
  - Inline coding
  - Force.com IDE
  - Aside.io
  - Welkin Suit

- Wrapper Classes
  - Display multi object data
  - Adding check boxes to the data and perform related operations

- View State
  - Types of Data Saved in View State
  - Transient Variable and Objects
  - Enable View State Inspector
  - Tips on reducing View State Size

- Ajax Components & its related components
  - Action Function
  - Action Support
  - Action Region
  - Action Pollar
  - Rerender
  - Render
  - Facet
  - Outputpanel

- Batch Apex

- Batch apex Use and its Methods

- Scheduling Apex
  - Scheduling apex Use and its Methods
  - Limitations

- Triggers
  - Trigger Events
  - Trigger Overview
  - Defining Triggers in Salesforce

- Test Class or Code Coverage
  - Why Test Classes
  - How to write Test Classes
  - Min and Max code coverage for deployment

- Packages
  - Package Overview
  - Defining packages
  - Package Types
    - Managed
    - Unmanaged
  - Managed Vs Unmanaged Packages

- Different sandboxes and Deployment
  - Sandbox Vs. Production Environments
  - Change sets
  - Limitation

4. Lighting Aura - 5 Days

- Introduction to Salesforce Lightning experience o Salesforce Lightning Basics
  - Introduction to Lightning Components
  - What can I build with Lightning Components?
  - Lightning Component Framework - Hello World Example
  - Overview of Lightning Web Components
  - Lightning Web Component Framework – Hello World example
  - Reports & Dashboards for Lightning Experience

- Migrate to Lightning Experience
  - Lightning App Builder
  - Lightning Process Builder
  - Lightning Alternatives to JavaScript Buttons

- PROGRAMMING LIGHTNING COMPONENTS

- Introduction to Lightning Components
- Creating Lightning Components
- Using Components
- Communication With Events
- Lightning Web Components working with Aura Framework
- Handle Events in Lightning Web Components
- Push and Deploy Lightning Web Component Files
- App Customization Lite (Customize your app's page layouts, compact layouts, and actions)

- Lightning Apps
  - Creating Apps
  - Using JavaScript
  - Using Apex
  - Debugging

- Visualforce & Lightning Experience
  - Using Visualforce in Lightning Experience
  - Developing Visualforce Pages for Lightning Experience
  - Exploring the Visualforce App Container
  - Sharing Visualforce Pages Between Classic and Lightning Experience
  - Managing Navigation
  - Understanding Important Visual Design Considerations
  - Knowing Which Features to Avoid in Lightning Experience

5. Lightning Web Component - 5 Days

- Introduction And getting started
  - Introduction to LWC
  - Set Up Development Environment
  - Create Developer Org and Setup Dev Hub
  - Create Scratch Org
  - Explore Salesforce CLI Commands

- LWC Fundamentals
  - Component Bundle
  - Hello World Component
  - Data Binding
  - Applying CSS
  - Conditional Rendering
  - Looping or Iteration
  - Hands on Exercise
  - Component Library Overview

- JavaScript Properties

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- Private Properties - Non-Reactive
- Private Properties - Reactive
- Release Update - All Properties Are Reactive
- Release Update - When To Use Track Decorator
- Getter Properties
- Public Properties
- Public Boolean Properties

- Component Lifecycle & Composition
  - Using Slots
  - Public Methods
  - Shadow DOM
  - Component Lifecycle

- Component Communication using Events
  - Dispatching And Handling Events
  - Communication Between Independent Components
  - Share Javascript Code

- Access Salesforce Data
  - Working With Salesforce Data - An Overview
  - Lightning Data Service - Create Record
  - Lightning Data Service - View Record
  - LDS - RecordViewForm and RecordEditForm
  - LDS - RecordForm Base Component
  - Call Apex Method Using Wire Adapter
  - Call Apex Method Imperatively

- Navigation Services & Other Features
  - Display A Toast Notification
  - Get Record Id and Object Name from Framework
  - Meta File Configurations
  - Lightning Navigation Service Overview
  - Examples of Lightning Navigation Service
  - Using 3rd Party Libraries

- Aura and LWC interoperability
  - Communicate In Same Component Hierarchy
  - Communicate In Different Components Hierarchy

- Testing your Lightning Web Components
  - JTest Setup
  - Writing Tests For Your Lightning Web Components
  - Debugging Test Files - Using Chrome
  - Debugging Test Files - Using VS Code

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6. Integration - 3 Days

- Rest & SOAP API
  - What is Integration?
  - What all type of integrations we have?
  - What is REST API and SOAP API?
  - Difference annotations?
  - Difference between REST and SOAP?
  - How to make callouts?
  - How to expose salesforce data?
  - Authentication and Authorization
  - Difference ways to authorization.
  - What is Connected App?
  - What is WISDL?
  - Difference between partner and Enterprise WISDL?
  - Implementation with example

- Bulk API
  - What is Bulk API?
  - When to use Bulk API?
  - Implementation with example

- Reports and Dashboards
  - What is report?
  - What all types of report are in salesforce?
  - Explain all types of report with examples?
  - Explain different filters.
  - What is bucket field?
  - What is custom report type?
  - What are dashboards?
  - When can we create dashboards?
  - Prerequisite to create dashboards in Salesforce

- Salesforce Journey Builder or community
  - What is community portal?
  - What types of portals are in Salesforce?
  - How to enable customer community and partner community?
  - How to add profiles?
  - How to create users?
  - How many roles we can assign to partner user, what are limitations?
  - Security and sharing settings for portal users.

- Governor Limits

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