



Course Structure - Developer Certification

****Pre-requisites:****

Completed Admin course [or] Working knowledge of salesforce applications - incl. configuration, and data security.

Lesson 1: Introduction and Overview

1. Course Introduction
 - Overview and objectives of this course
 - Platform Developer I certification overview
 - Preparation from Day 1: Theory, Workshops, Notes, Flash Cards
2. Salesforce and Multi-tenancy
3. Salesforce architecture recap
 - developer perspective of architecture
 - MVC pattern
4. Device AppExchange strategy
 - Practical guide to use AppExchange
5. Salesforce Help and Documentation

Lesson 2: Configuration Deep dive 1

1. Core SFDC objects
 - Capabilities recap
2. Relationships in SFDC
 - Using Schema builder
 - Master-Detail vs Lookup
 - Relationship b/w common objects like Account, Contact, Opportunity, Case and Leads
3. Formula fields
 - What is possible?
 - Know differences of functions in formula fields vs. validation rules
4. Roll-up Summary fields
 - What is possible?
 - Use cases
5. Validation rules
 - Validation rules and how/when to use them?
 - Differences from using workflow/ visual flows / process flows
6. Recap record-types
 - Capabilities and usage
7. Workshop: Configuration Deep-dive 1
 - Use Schema Builder to create objects and fields
 - Identify differences b/w Schema Builder and other Configuration options
 - Identify use cases for formula fields and validation rules
 - Create formula, validation rules for given use cases



Lesson 3: Configuration Deep dive 2

1. Workflows
 - Create workflows to automate field updates
 - Create tasks and send emails
 - Limitations
2. Process
 - Use Process Builder
 - Understand limitations
3. Flows
 - Create flows
4. Demo: Use cases for Flow, Process and Workflows
5. Workshop: Configuration Deep-dive 2
 - Workflow
 - Process
 - Flow
6. Accessing SFDC Data from Backend
 - Salesforce Workbench
 - SOQL
 - SOSL
 - Use cases for SOQL and SOSL
7. Demo: Using Salesforce Workbench & Developer Console
8. Other declarative customization
 - Customization and features of Heroku platform
9. Declarative options vs. Code
10. Quick Recap of UI Configuration & Business Logic in UI
11. Workshop: SOQL and SOSL
 - Prepare and execute DML statements

Lesson 4: Introduction to Apex

1. Apex Overview
 - What is Apex?
 - Variables and constants in Apex
 - Primitive and complex data types
 - Lists, maps and sets
 - Apex triggers
 - Apex classes and methods
 - Using SOQL and SOSL within Apex
 - Governor limits
2. Demo: Write Apex
 - Use Developer console to write simple Apex
 - Debugging methods and tools



3. Workshop: Write simple Apex

Lesson 5: Apex Deep-dive 1

1. How does Apex fit in the OOP paradigm?
 - Class constructors
 - 'this' keyword
 - Inheritance
 - Interface
 - System classes and methods
2. Demo-driven Lessons: Bulkification vs. single record processing
3. Workshop: Apex
 - Create triggers & classes using OOP concepts
 - Bulkified code
4. Apex error handling
 - adderror()
 - try/catch
5. Workshop: Apex error handling

Lesson 6: Apex Deep-dive 2

1. Order of execution and Apex
 - Triggers vs. rest of logic in SFDC for data updates
 - Recursion/cascading
2. Data security in Apex
 - Sharing rules
 - Access for Apex creation/execution
 - Differences between anonymous execution, triggers, and classes
3. Testing
 - Importance of test classes
 - Code coverage
 - How to write test class for triggers, controllers and classes?
 - Execute one or multiple test classes
 - Execution in anonymous vs. tests
4. Debug logs
5. Workshop: Write test classes

Lesson 7: Apex Deep-dive 3

1. Introduction to Apex Frameworks and Separation of Concerns
2. Introduction to test data management
3. Workshops:
 - Write advanced / production grade Apex



Lesson 8: Introduction to Visualforce

1. Visualforce Overview
 - What is VF?
 - When to use VF pages?
 - Architecture
2. Visualforce components
 - Pages
 - Components
 - Tags
 - Expression syntax
3. Visualforce controllers
 - Standard controllers
 - Custom controllers
 - Controller extensions
4. Demo-driven Lessons: Simple VF page vs. configured page
5. Visualforce data
 - Data binding and traversing data
 - Actions
 - Action and navigation methods
 - Handling errors
6. Workshop: Create VF pages using standard and custom controllers

Lesson 9: Visualforce II and Lightning

1. Testing VF pages and controllers
2. Using static resources, Javascript and Stylesheets in VF
3. Workshop: Use VF to write complex UI
4. Security vulnerabilities in VF and Apex
 - Know of common security vulnerabilities and how to avoid them

Lesson 10: Lightning II

1. Lightning overview
 - What is Lightning?
 - Why Lightning?
 - Architecture
2. Demo: Showcase Lightning pages vs. VF
3. Creating Lightning UI
 - Apps
 - Components
4. Workshop: Create simple Lightning apps
 - Lightning components
 - Lightning pages & apps



5. VF pages in Lightning
 - Style sheets to access VF page

Lesson 11: Deployments in Salesforce

1. Deployment considerations
 - Development environments in real-world
 - Describe different tool-sets for deployment
2. Metadata deployment
 - ANT tool
 - Change sets
 - Salesforce DX
3. Business data updates and deployment
4. Workshop:
 - SFDC schema access using REST API
 - Create environments and use change-sets
 - Data migration

Lesson 12: Tools for Developers

1. Introduction to IDE
 - Eclipse IDE and VS Code
 - Changes to the development and deployment lifecycle
2. Introduction to Git
 - What is Git?
 - How to use Git?
 - Usage of Git with SFDC
3. DevOps workflow
 - Version control as source of truth
 - Development & deployment in real-world
 - Code merge
 - Static code analysis tools
 - Test automation
4. Demo:
 - DevOps flow
5. Workshop:
 - Use IDE
 - Create and deploy components
 - Use DevOps flow to develop & deploy changes

Lesson 13: Revision and Prep

1. Exam Prep and Next Steps
 - Mindset



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- Study of scenarios & questions
 - Multiple choice questions
 - References for further preparation
2. Workshop: Admin Certification Exam Samples
 3. Q & A

Lessons 14 - 15: Workshops on Real-World Case Studies

