

Build Applications Programmatically on the Salesforce Platform

Code: DEX450
Length: 5 days
URL: [View Online](#)

Discover how to design and customize pro-code applications on the Salesforce Platform using Apex, Visualforce markup, and the Lightning Component Framework. In this 5-day class, learn how to develop and deploy custom pro-code solutions by writing and testing custom logic, and by customizing the user interface with basic Visualforce pages and Lightning Web Components. Examine how Apex interacts with no-code customizations on the platform, gain a basic understanding of no-code automation tools, and explore the nuances of working on a multi-tenant platform to build cohesive pro-code solutions that meet business demands.

Skills Gained

When you complete this course, you will be able to:

- Design custom pro-code solutions that effectively leverage no-code customizations.
- Write basic Lightning Web Components and basic Visualforce markup and code to customize the UI.
- Use Apex triggers and classes to write business logic customizations that use Salesforce Object Query Language (SOQL), Salesforce Object Search Language (SOSL), and Data Manipulation Language (DML).
- Test Apex by using the built-in testing framework.
- Explain how trigger code works in accordance with the Salesforce Order of Execution.
- Understand key fundamentals of designing programs on a multi-tenant platform.
- Use Visual Studio Code, the Salesforce Extension Pack, and Salesforce Command Line Interface (CLI) to learn about modern tools for developing on the Salesforce Platform.

Who Can Benefit

This class is designed for developers looking to write pro-code customizations for business logic and user interface (UI) layers using Apex, Visualforce, and Lightning Web Components. Students will ideally have a solid understanding of core object-oriented programming concepts and experience building no-code solutions on the Salesforce Platform, although this is not required. This is also a great class for developers looking to earn their Salesforce Platform Developer I credential.

Course Details

Note

Students who plan on using their own computer for an in-person or virtual class are expected to follow the steps outlined in the following [Computer Setup Guide](#).

Lessons and Topics

No-Code Automation

- Create Formula Fields
- Create Roll-Up Summary Fields
- Understand Record Types and Dynamic Forms
- Review Additional Automation Tools

Apex Coding

- Define Apex
- Identify Key Characteristics of Apex and Other Coding Languages
- Examine the Role of Transactions and Governor Limits in Writing Apex
- Build a Simple Apex
- Discover sObjects, Primitive Data Types, and Basic Control Statements

Org Data Retrieval Using SOQL & SOSL

- Define SOQL
- Write a Basic SOQL Query
- Process Query Results with Apex
- Create a Query Dynamically at Run-Time
- Define a Relationship Query
- Query Parent-Child Relationships Using SOQL
- Write Child-to-Parent and Parent-to-Child Relationship Queries
- Define SOSL
- Search Data Using SOSL

Org Data Manipulation Using DML

- Define DML
- Identify Different Methods for Invoking DML Operations
- Use Apex to Invoke DML Operations and Handle DML Errors

Deployment

- Define Deployment
- Deploy Code Using Change Sets
- Examine Managed, Unmanaged, and Unlocked Packages
- Explore Salesforce DX
- Discover the Salesforce DevOps Center

Apex Trigger Essentials

- Define Apex Triggers
- Review Apex Trigger Use Cases

- Examine Trigger Definition Syntax
- Use Trigger Context Variables

Apex Class Essentials

- Define Apex Classes
- Review Apex Class Use Cases
- Identify Apex Class Data Access Capabilities

Order of Execution, Apex Transactions, & Platform Events

- Define the Salesforce Order of Execution
- Discover How Triggers May be Used and Impacted by the Order of Execution
- Examine the Apex Transaction Lifecycle
- Learn Static Attributes of Memory Lifecycles
- Implement Error Logging Using Platform Events

Apex Testing

- Define the Apex Testing Framework
- Create Apex Test Data
- Write and Run an Apex Test
- Review Apex Testing Best Practices

Design Strategies for Efficient Apex Solutions

- Identify Apex Code Writing Best Practices
- Use Input Data Batches to Write Apex Triggers and Classes
- Write Efficient Database Querying and DML Code

Apex Trigger Design Strategies

- Define No-Code Solutions to Implement Complex Business Logic
- Improve Pro-Code Solutions Using No-Code Functionality

Visualforce

- Create a Basic Visualforce Page
- Reference Standard Controllers
- Display Record Data in a Visualforce Page
- Reference Custom Controllers and Controller Extensions
- Utilize List Controllers
- Identify Fundamental Considerations for Visualforce Development

Lightning Web Components

- Review the Lightning Component Framework
- Examine Aura and Lightning Web Component Structure

- Create Custom Lightning Web Components
- Create a Custom Lightning Application
- Utilize Lightning Web Component Properties and Events
- Display and Modify Record Data
- Reference Base Lightning Web Components
- Reference the Salesforce Lightning Design System
- Surface Custom Lightning Web Components

Schedule (as of 4)

Date	Location	
May 6, 2024 – May 10, 2024	Virtual	Enroll
May 20, 2024 – May 24, 2024	Virtual	Enroll
Jun 3, 2024 – Jun 7, 2024	Virtual	Enroll
Jun 17, 2024 – Jun 21, 2024	Virtual	Enroll
Jul 8, 2024 – Jul 12, 2024	Virtual	Enroll
Jul 29, 2024 – Aug 2, 2024	Virtual	Enroll

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