55384: Microsoft® Power Platform® for Developers

Duration: 3 Days
Method: Instructor-Led Training (ILT) | Live Online Training

Course Description

This course will provide insight into the development techniques and approaches that can be applied to solutions built on the Microsoft Power Platform. Participants will learn the necessary skills to:

- Extend the features of Model-Driven Apps and Canvas Apps using code,
- Integrate with the Dataverse using the Web API,
- Build custom controls using the Power Apps Component Framework (PCF),
- Implementing custom business logic through Plug-Ins and Custom Workflow Activities,
- Write client-side code that interacts with the Client Object Model, and
- Implement Custom Connectors.

Participants will also learn about the Application Lifecycle Management (ALM) frameworks available to help support and maintain Power Platform implementations, including the Microsoft Power Platform Build Tools for Azure® DevOps and the PowerApps® Center of Excellence (CoE).

Target Audience

This course is intended for:

- Technical Students,
- Administrators,
- Developers,
- Experienced IT Professionals.

Prerequisites

To attend this course, candidates must have:

- Working knowledge of Model-Driven Apps and Canvas Apps in the Microsoft Power Platform, Microsoft .Net and Visual Studio®.

Microsoft Partner

Tel: 876-978-1107 / 876-978-1486
WhatsApp: 876-978-9353
E-Mail: training@RWTTS.com | **Website:** www.RWTTS.com

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Course Objectives

Upon successful completion of this course, attendees will be able to:

- Understand the features and tools that exist for Developers in the Microsoft Power Platform.
- Extend Model-Driven and Canvas Apps with code to support complex business requirements.
- Understand how to set up projects in Microsoft Visual Studio in preparation to write code and connect to and extend the Dataverse.
- Write server and client-side code to execute commands and read and write data to and from the Dataverse using the Web API.
- Download and configure developer resources and tools such as the PowerApps Component Framework (PCF), the Customer Engagement Software Development Toolkit and Visual Studio resources.
- Build custom components using the PowerApps Component Framework (PCF).
- Understand where and how to use the Power Apps Command Line Interface (CLI).
- Extend Model-Driven Apps with custom business logic using Plug-In and Custom Workflow Activities.
- Build, configure and deploy Custom Connectors in the Power Apps Maker Portal.
- Embed Canvas Apps and PCF components into Model-Driven Apps.
- Write JavaScript code to extend Model-Driven Apps using the Client API Object Model.
- Understand the best practice methodologies when extending and writing code for Apps and solutions built on the Microsoft Power Platform.
- Understand the need for Application Lifecycle Management (ALM) through the implementation of Microsoft Power Platform Build Tools for Azure DevOps and the Power Apps Center of Excellence (CoE).

Course Topics

Module 1: Introduction to Power Platform Development

- The Microsoft Power Platform Overview
- App Makers vs Pro Developers
- Pro Code Developer Options
- Development Tools
- The Customer Engagement Toolkit
- Environments and Solutions
- Security Considerations
- Application Lifecycle Management
- Valuable Skills
- Further Reading and Resources

Course Topics *Continued*

Module 2: Working with the Dataverse Using the API
- Introduction to API Programming
- Authentication Considerations
- The Web API
- The Discovery Web Service
- The Organization Web Service
- Core Assemblies
- Early and Late-Bound Classes
- The Code Generation Tool
- Service Context
- CRUD Operations
- Using the QueryExpression Class
- Using LINQ

Module 3: Developing Client-Side Code
- Introduction to Client-Side Coding
- The Client-Side Events
- The Client API Object Model
- Using Web Resources

Module 4: Developing Plug-Ins
- Introduction to Plug-Ins
- Writing Plug-In Code
- Using the Plug-In Registration Tool
- Debugging Plug-Ins with the Plug-In Profiler
- Deploying Plug-Ins with Solutions

Module 5: Developing Custom Workflow Activities
- Introduction to Custom Workflow Activities
- Writing Custom Workflow Activity code
- Deploying a Custom Workflow Activity

Module 6: Extending PowerApps
- Introduction Custom Controls
- Extending Model-Driven Apps with Canvas Apps
- Embedding Canvas Apps as Custom Controls

Module 7: The PowerApps Component Framework (PCF)
- Introduction to PCF
- The PCF Command Line Interface (CLI)
- Creating PCF Components
- The PCF Test Environment
- Deploying PCF Components in a Model-Driven App

Module 8: Developing Custom Connectors
- Connectors Overview
- Custom Connectors
- Create a Custom Connector

Module 9: Application Lifecycle Management (ALM)
- Introduction to ALM
- Environments and Solution Management
- Microsoft Power Platform Build Tools
- The Power Apps Center of Excellence

LABS INCLUDED

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