

Developing Canvas Apps with Microsoft Power Apps

Target Audience

This course is designed for business professionals, citizen developers, IT professionals, and Power Platform users who want to design, build, and manage canvas apps using Microsoft Power Apps. It is ideal for learners who want to create data-driven business applications, work with external data sources, and enhance app functionality using Power Fx formulas.

Course Objective

The objective of this course is to provide participants with the knowledge and practical skills required to develop canvas apps using Microsoft Power Apps. Participants will learn how to create and manage canvas apps, write and manage data, connect to external data sources, and use formulas to enhance app behaviour and user experience.

Course Outcome

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

- Create and manage canvas apps using Microsoft Power Apps
- Design user interfaces using controls, forms, and galleries
- Write data to various data sources from canvas apps
- Connect canvas apps to external data sources
- Use Power Fx formulas to implement business logic
- Test, optimize, and manage canvas apps in enterprise environments

Course Outline: The course comprises **40 hours** of theory and practical labs and is divided into 10 comprehensive chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Module 1: Introduction to Microsoft Power Platform and Power Apps

Topics

- Overview of Microsoft Power Platform
- Introduction to Microsoft Power Apps
- Canvas apps vs model-driven apps
- Power Apps licensing and environments
- Overview of Power Apps Studio

Lab

- Access Power Apps Studio
- Explore sample canvas apps

Module 2: Creating Canvas Apps

Topics

- Creating a canvas app from scratch
- Creating a canvas app from templates
- Understanding app screens and navigation
- Saving and publishing canvas apps

Lab

- Create a canvas app from scratch
- Publish and test the app

Module 3: Managing Canvas Apps

Topics

- App versioning and restore
- Sharing canvas apps with users
- Managing permissions and access
- Updating and maintaining apps

Lab

- Share a canvas app
- Restore a previous version

Module 4: Designing User Interfaces in Canvas Apps

Topics

- Working with screens and layouts
- Using controls in canvas apps
- Galleries and forms

- Basic UI and usability principles

Lab

- Design app UI using galleries and forms
- Configure navigation between screens

Module 5: Writing Data in Canvas Apps

Topics

- Understanding data write operations
- SubmitForm function
- Patch function
- Update Context and Collect functions
- Input validation techniques

Lab

- Write data to a data source using forms
- Update records using Patch

Module 6: Working with External Data Sources

Topics

- Overview of data sources in Power Apps
- Connecting to SharePoint lists
- Connecting to Excel and OneDrive
- Working with Dataverse
- Delegation concepts and limitations

Lab

- Connect canvas app to an external data source
- Display and filter external data

Module 7: Using Basic Formulas in Canvas Apps

Topics

- Introduction to Power Fx
- Basic formulas and functions
- Logical functions (If, Switch)
- Working with collections
- Using formulas to control app behavior

Lab

- Implement formulas to control app logic
- Create calculated fields

Module 8: Advanced Formula Techniques

Topics

- Nested formulas
- Formula-based validation
- Delegation warnings and resolution
- Performance considerations

Lab

- Optimize formulas for performance
- Resolve delegation warnings

Module 9: Testing and Optimizing Canvas Apps

Topics

- Testing canvas apps
- Debugging Power Fx formulas
- Performance optimization techniques
- Accessibility considerations

Lab

- Test and debug a canvas app
- Optimize app performance

Module 10: Administration, Deployment, and Maintenance

Topics

- Managing Power Apps environments
- Monitoring app usage and performance
- Moving apps between environments
- App lifecycle management

Lab

- Monitor canvas app usage
- Manage app environments