

Module Title : Course 20481A: Essentials of Developing Windows Store Apps Using HTML5 and JavaScript

Duration : 5 days

Course Description

In this course students will learn essential programming skills and techniques that are required to develop Windows Store apps. This includes a combination of both design and development skills, as well as ensuring that students are comfortable using and making the most of the Visual Studio and Expression Blend tools.

Audience

This course is intended for professional developers who have 1 or more years of experience in creating applications.

Prerequisites

Before attending this course, students must have:

- 1 or more years of experience creating applications.
- 1 – 3 months experience creating Windows client applications.
- 1 – 3 months experience using Visual Studio 2010 or 2012.
- Material taught in 20480A: Programming in HTML5 with JavaScript and CSS3, or equivalent.

At Course Completion

After completing this course, students will be able to:

- Describe the Windows 8 platform and features, and explore the basics of a Windows app interface.
- Create the User Interface layout and structure.
- Apply the MVVM pattern to application design.
- Implement the AppBar and layout controls.
- Use templates to create the UI.
- Use data binding to present data in the UI.
- Handle files and streams.
- Design and implement Process Lifetime Management (PLM).
- Handle navigation scenarios in a Windows Store app.

- Implement Semantic Zoom.
- Design and implement contracts such as Search, Share and Settings.
- Implement tiles and toast notifications in a Windows Store app.
- Respond to mouse, keyboard and touch events, including gestures.
- Deploy a Windows Store app to the Windows Store or an enterprise store.

Course Outline

Module 1: Overview of the Windows 8 Platform and Windows Store Apps

This module describes the Windows 8 platform and features, and explores the basics of a Windows Store app interface.

Lessons

- Introduction to the Windows 8 Platform
- Windows 8 User Interface Principles
- WinRT and Language Projections

Lab : Overview of the Windows 8 Platform and Windows Store Apps

- Explore Windows 8 Platform
- Explore a Windows Store App

After completing this module, students will be able to:

- Describe the Windows 8 platform, architecture, and features.
- Explain the basics of the Windows 8 UI and Windows Store app experience and how it differs from Windows desktop apps.
- Explain the new API model, how it supports building Windows Store apps, and how it supports multiple language-specific projections.

Module 2: Single-Page Applications and the MVVM Design Pattern

This module describes the principles used for building single-page apps and how to apply the MVVM design pattern using JavaScript

Lessons

- Single-Page Applications
- The MVVM Design Pattern

Lab : Single-Page Apps and the MVVM Design Pattern

- Paper Based Quiz

After completing this module, students will be able to:

- Describe SPA-based Windows Store apps.
- Design and implement Windows Store apps using MVVM.

Module 3: Using WinJS

This module explains how to use WinJS to build Windows Store apps.

Lessons

- The WinJS Library
- WinJS APIs

Lab : Using WinJS

- Define the Data Namespace and Objects
- Use promises to load data asynchronously

After completing this module, students will be able to:

- Describe the WinJS library and its purpose.
- Describe commonly used WinJS APIs.

Module 4: Implementing Layout using Windows 8 Built-In Controls

This module explains how to implement the AppBar and layout controls.

Lessons

- Windows 8 Layout Controls
- Implementing WinJS Controls and Templates
- The AppBar Control
- Snap and Fill

Lab : Implementing Layout using Windows 8 Built-In Controls

- Implement an AppBar Control
- Create Adaptive Views

After completing this module, students will be able to:

- Describe layout controls available for Windows Store apps.
- Implement a control template for use with built-in controls.
- Describe the AppBar and its functionality.
- Support snapped and fill views in your app.

Module 5: Presenting Data

This module explains how to use data binding to present data in the User Interface.

Lessons

- Working with Data Presentation Controls
- The ListView Control

Lab : Presenting Data

- Implement the ListView Control

After completing this module, students will be able to:

- Describe the different ways data can be displayed in Windows Store apps.
- Explain how to use a ListView control.

Module 6: Handling Files in Windows Store Apps

This module explains how to handle files and streams in Windows Store Apps. **Lessons**

- Handling Files and Streams in Windows Store apps
- Working with File User Interface Components

Lab : Handling Files in Windows Store Apps

- Write Data to the Notes File
- Read Data from the Notes File

After completing this module, students will be able to:

- Work with files and streams using WinRT.
- Use WinRT pickers to display a selection UI.

Module 7: Windows Store App Process Lifetime Management

This module explains how to respond to application lifecycle events using Process Lifetime Management (PLM) and the PLM extensibility points provided by the Visual Studio 2012 templates.

Lessons

- Process Lifetime Management
- Launching Windows Store Apps
- Implementing State Management Strategy

Lab : Windows Store App Process Lifetime Management

- Explore the Different PLM States
- Implement State Management

After completing this module, students will be able to:

- Describe the various states of a Windows Store app.
- Describe app activation modes.
- Implement app state management.

Module 8: Designing and Implementing Navigation in a Windows Store App

This module explains how to handle navigation scenarios in a Windows Store app and how to implement Semantic Zoom.

Lessons

- Handling Navigation in Windows Store apps

- Semantic Zoom

Lab : Designing and Implementing Navigation in a Windows Store App

- Add Navigation to the App
- Implement Semantic Zoom

After completing this module, students will be able to:

- Describe navigation principles in Windows Store apps.
- Describe Semantic Zoom.

Module 9: Implementing Windows 8 Contracts

This module explains how to design and implement Windows 8 contracts such as Search, Share and Settings.

Lessons

- Designing for Charms and Contracts
- The Search Contract
- The Share Contract
- Managing App Settings and Preferences

Lab : Implementing Windows 8 Contracts

- Implement the Search Contract
- Implement the Share Contract
- Adding a New Setting to the Settings Pane

After completing this module, students will be able to:

- Design apps to use charms and contracts.
- Implement the Search contract.
- Implement the Share Target and Share Source contracts.
- Describe the Settings pane and add settings commands.

Module 10: Implementing Tiles and User Notifications

This module explains how to implement tiles and toast notifications in a Windows Store App.

Lessons

- Implementing Tiles, Live Tiles, Secondary Tiles, and Badge Notifications
- Implementing Toast Notifications

Lab : Implementing Tiles and User Notifications

- Enable Live Tile Functionality in the Main Tile
- Add Secondary Tile Functionality

After completing this module, students will be able to:

- Implement tile, live tiles and secondary tiles.

- Implement toast notifications.

Module 11: Designing and Implementing a Data Access Strategy

This module explains how to implement various data access scenarios for Windows Store apps.

Lessons

- Evaluating Data Access Strategies
- Working with Remote Data

Lab : Designing and Implementing a Data Access Strategy

- Paper Based Quiz

After completing this module, students will be able to:

- Describe various data access strategies.
- Describe common use cases that occur while you work with remote data.

Module 12: Responding to Mouse and Touch

This module explains how to respond to mouse, keyboard and touch events, including gestures.

Lessons

- Working with Mouse Events
- Working with Gesture Events

Lab : Responding to Mouse and Touch

- Implement Mouse Events
- Implement Gesture Events

After completing this module, students will be able to:

- Describe mouse events and touch gestures in Windows 8.
- Explain gestures handling best practices.

Module 13: Planning for Windows Store App Deployment

This module explains how to deploy Windows Store apps to the Windows Store or an enterprise store.

Lessons

- The Windows Store App Manifest
- Windows Store App Certification
- Windows 8 Enterprise App Deployment

After completing this module, students will be able to:

- Change an app's package manifest to meet the requirements of deploying to the Windows Store
- Deploy an app to the Windows Store
- Prepare an app for enterprise deployment