

Course 20482B:

## Advanced Windows Store App Development Using HTML5 and JavaScript

Course Length: 5 days

### Overview

In this course the students will learn the more advanced programming skills and techniques that they can use to optimize their Windows Store app and differentiate their app from other apps in the Windows Store. These advanced skills and techniques include a combination of both design and development skills. The students will also learn about supporting the apps that they have published to the Windows Store.

### Target Student

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

### Objectives

After completing this course, students will be able to:

- Add animations and transitions in a Windows Store app to improve the user experience.
- Localize the Windows Store app UI.
- Brand the Windows Store app and improve the loading experience with a splash screen.
- Use various storage mechanisms, choose a suitable caching strategy for their Windows Store app, and use advanced file access methods.
- Create custom controls, extend templated controls, and create and consume WinMD components.
- Implement the Print and Settings contracts and the Play To API.
- Work with the Push Notification Service (WNS).
- Capture media with the camera and microphone.
- Create and consume background tasks.
- Discover device capabilities, interact with devices, and act upon sensor data.
- Implement Windows Store trial licensing and in-app purchasing and advertising.
- Understand how to manage Windows authentication and web authentication in Windows Store apps.
- Diagnose problems and monitor application behavior using tracing and profiling tools and APIs.

### Course Content

#### Module 1: Windows Store App Essentials

This module describes the essential Windows Store app features.

#### Lessons

##### Review Windows Store App Essentials

##### Review Windows Store App Essentials - Under the Hood

After completing this module, students will be able to:

Describe basic Windows Store app concepts related to the app presentation.

Describe basic Windows Store app concepts related to integration with the Windows 8 ecosystem.

#### Module 2: Implementing Animations and Transitions

This module explains how to add animations and transitions to improve the user experience by using JavaScript APIs and CSS.

#### Lessons

##### Using Animation

##### Working with Transitions and Transformations

##### Lab: Implementing Animations and Transitions

##### Creating Animations in a Windows Store App

##### Creating Transitions and Transformations in a Windows Store App

After completing this module, students will be able to:

Describe the built-in WinJS animation library and CSS animations.

Apply transitions and transformations.

### Module 3: Implementing Globalization and Localization

This module explains how to localize the Windows Store application User Interface.

Lessons

Working with Resource Files

Implementing Culture-Specific Formatting

Lab: Implementing Globalization and Localization

Create and Consume Resource Files

Apply Culture-Specific Formatting

After completing this module, students will be able to:

Create and consume localized resources.

Apply language-specific formatting for a multi-lingual application.

### Module 4: Branding and a Seamless User Interface

This module explains how to brand Windows Store app and improve the loading experience with a splash screen.

Lessons

Customizing the Splash Screen

Branding the User Interface

Lab: Branding and Seamless User Interface

Create a Customized Splash Screen

Branding a Windows Store App

After completing this module, students will be able to:

Create and present a splash screen.

Differentiate Windows Store apps by branding.

### Module 5: Advanced Data Scenarios in a Windows Store App

This module explains how to use various storage mechanisms, choose a suitable caching strategy for a Windows Store app, and use advanced file access methods.

Lessons

Windows Store App Storage Options

Implementing Data Caching

Advanced File Functionality

Lab: Caching Data

Cache Data

After completing this module, students will be able to:

Describe the storage mechanisms available to Windows Store apps.

Describe caching strategies.

Describe advanced file access options.

### Module 6: Creating Reusable Controls and Components

This module explains how to create custom controls, extend templated controls, and create and consume WinMD components.

Lessons

Creating Custom Controls

Extending Existing Controls

Consuming WinMD Components

Lab: Creating Reusable Controls and Components

Create and Use a Custom Control

Consume a WinMD Component

After completing this module, students will be able to:

Create reusable custom controls.

Create and extend templated controls.

Consume a WinMD component.

### Module 7: Implementing Advanced Contract Scenarios

This module explains how to implement the Print and Settings contracts and the Play To API.

Lessons

The Print Contract

The Play To Contract

Lab: Printing

Print a single page

Print multiple pages

After completing this module, students will be able to:

Print by using the print contact.

Describe the Play To API.

Module 8: The Windows Push Notification Service (WNS)

This module explains how to work with the Push Notification Service (WNS).

Lessons

The Push Notification Service (WNS)

Communicating with the Push Notification Service (WNS)

Lab: The Windows Push Notification Service (WNS)

Manage a Windows Notification Service (WNS) Channel

After completing this module, students will be able to:

Describe the Push Notification Service (WNS).

Work with push notifications.

Module 9: Capturing Media

This module explains how to capture media with the camera and microphone.

Lessons

Using CameraCaptureUI to Capture Pictures, Videos or Audio

Using MediaCapture to Capture Pictures, Video, or Audio

Lab: Capturing Media

Capture video using the CameraCaptureUI API

Capture image using the MediaCapture API

After completing this module, students will be able to:

Use the CameraCaptureUI API.

Use the MediaCapture API.

Module 10: Background Tasks

This module explains how to create and consume background tasks.

Lessons

Creating Background Tasks

Consuming Background Tasks in a Windows Store App

Lab: Background Tasks

Create and Consume a Background Task

Consume background tasks.

After completing this module, students will be able to:

Create background tasks.

Consume background tasks.

Module 11: Working with Sensors and Devices

This module explains how to discover device capabilities, interact with devices, and act upon sensor data.

Lessons

Working with Sensors

Working with Devices

Lab: Working with Sensors and Devices

Use the orientation sensor

Use location services

After completing this module, students will be able to:

Discover sensors, test their availability, and handle sensor events.

Discover device availability, enumerate devices and their capabilities and properties, and use them.

Module 12: Generating Revenue with your App

This module explains how implement trial licensing and in-app purchasing and advertising.

Lessons

Implementing Trial Functionality in a Windows Store App

Implement In-App Purchases

Advertising in a Windows Store App

Lab: Generating Revenue with your App

Use Windows Store Classes to Support Trial App Conversion

Implement In-App Purchasing in an App

After completing this module, students will be able to:  
Implement trial functionality and transition to a full license.  
Implement in-app purchases.  
Implement advertising functionality.

#### Module 13: Securing Windows Store App Data

This module explains how to manage Windows authentication and web authentication in Windows Store apps.

##### Lessons

Managing Windows Authentication

Managing Web Authentication

Encryption in Windows Store Apps

Lab: Securing Windows Store App Data

Encrypt User Information

Use ACS Authentication

After completing this module, students will be able to:

Authenticate using Windows Live Authentication.

Authenticate using web authentication protocols.

Encrypt data.

#### Module 14: Tracing and Profiling Windows Store Apps

This module explains how to diagnose problems and monitor Windows Store app behavior by using tracing and profiling tools and APIs.

##### Lessons

Tracing a Windows Store App

Profiling a Windows Store App

After completing this module, students will be able to:

Trace a Windows Store app.

Profile a Windows Store app.

Before attending this course, students must have:

6 - 12 months experience programming in HTML5.

3 - 6 months experience using Visual Studio 2012 (including experience using preview builds).

1 month of experience working on Windows 8 apps.