

# Coded UI Automation Testing

## Curriculum

**Duration: 2 Months**

**Application Life Cycle Management ALM (VSTS/CodedUI/TFS/MTM)**

- TFS and importance in Testing
- Microsoft Test Manager (MTM) and its role in End to End Test Management
- Big Picture of VSTS, TFS and MTM and its integration
- Coded UI (VSTS) overview & its prerequisites

**C# Programming**

- Basics
- Methods
- OOP Concepts
- Properties & Exceptions
- Database Connectivity

**Coded UI Basics**

- Record and playback.
- UI Map Files and Test Builder
- Control Properties
- Ordered Test
- UI Test Object Repository
- Multiple UI Test
- Test Context
- Test Attributes

**Data driven Parameterization**

- Using CSV File
- Using Database
- Excel Sheet

**Hand Coding in CodedUI Test using C# - UI Test Control**

- UI Test Control and UI Test Control Collection
- Accessing Properties of UI Controls
- Multiple ways of Working with text Box (htmledit)
- Working with Combo Box, Radio Buttons, CheckBox, Table etc
- Mouse Actions (Click, doubleclick, hover etc..)
- Working with Dynamic Assertions

### **Automating WebBased App - Browser Specific Concepts**

- BrowserWindow Properties (Uri/Version/CloseOnPlaybackCleanup etc.) ·
- BrowserWindow Methods(Refresh/ClearCache/From Process/Clear Cookies)
- Killing Browser Instances(Chrome/ InternetExplorer/Firefox/Chrome etc) ·
- Using CodedUI Test for Browser Compatibility Testing
- Integrating Selenium Web Driver for execution in different Browser ·
- Working with Selenium web Driver dlls for Visual Studio

### **Automating Windows Based Application (WIN Controls)**

- Understanding Microsoft.VisualStudio.TestTools.UITesting.Wincontrols ·
- Approach of creating a WIN Controls and how it's different from HTML control
- Creating Input Box, Radio Button, Checkbox, List Box, Combo Box, Hyperlink
- Performing actions on Combo Box, Radio Button, Checkbox etc.. ·
- Assigning properties to the controls

### **Assertions or Validations or Checkpoints in CodedUI Test**

- Types of Assertions (UIValidation/Database Validation, Property Validation etc.)
- Assertion Types - AreEqual, AreNotEqual, AreSame, Fail, Inconclusive ·
- StringAssert, IsInstanceOfType, Is Not InstanceOfType, IsNotNull, IsNull

### **Synchronization in Coded UI Test**

- Ways of handling Synchronization issues in Coded UI Test
- Wait for Control Ready, Wait For Control Enabled, Wait For Control Exist
- Wait for Control Not Exist,
- Wait For Control Property Equal,
- Wait for Control Property Not Equal
- Wait for Control Condition,
- Wait For Condition ·
- Playback. Wait (), Thread. Sleep ()

### **Hybrid Framework for a Web or Windows application**

**Execution of Test Scripts (VS, MTM, Test Rig etc.)**

**Test Result Summary and Analysis**

**Introduction to Web Performance and Load Test using VSTS**