

Automation Testing - QTP/UFT

Duration- 40 hours

● Introduction to Automation Testing

- What is Automation Testing?
- Benefits of Automation Testing?
- Manual Testing vs. Automation Testing
- Types of Automation Testing Tools
- Tool Selection Criteria
- Automation Testing Process
- When should Test Automation be used?
- When should Test Automation be avoided?

● Introduction to QTP/UFT

- Overview of Add-In Manager and QuickTest
- QuickTest Window and Tools
- QuickTest Commands
- Tools in QuickTest

● Record and Playback

- Recording a Test
- Understanding your recorded Test
- Executing a Test

- Different Recording Levels
- Default Recording
- Analog Recording
- Low-Level Recording
- Analyzing the Results

- **Introduction to VB Script**

- Difference between Languages and Scripts
- VB script Language Overview
- History of VBScript
- VBScript and Versions
- Difference between Languages and Scripting

- **Comments**

- list operations
- list methods
- Strings are special kinds of lists
- tuples

- sets

- Dictionaries

- **VB Scripts Variable**

- Declaring Variables

- Option Explicit

- Naming Restrictions for Variables

- Scope of Variables

- Life Time of Variables

- Assigning Values to Variables

- Scalar Variables and Array Variables

- Dynamic Arrays

- **VB Script Data Types**

- Variant Subtypes

- **VB Script Operators**

- Operator Precedence

- Arithmetic Operators

- Comparison Operators

- Logical Operators

- **Input/Output Operations**

- InputBox Function
- MsgBox Function

- **Constants**

- Creating Constants

- **Conditional Statements**

- If Statement
- If...Then....Else Statement
- If...Then....Elseif Statement
- Select...Case Statement

- **Loop Through Code**

- Do...Loop
- Do Until
- While...Wend
- For...Next
- For Each...Next

- **Other Statements Procedure**

- Sub Procedures
- Function Procedures

- **Error Handling**

- Handling Syntax & Runtime Errors
- Coding to Avoid Errors
- Coding to Handle Errors
- The Error Object
- The Raise Method

- **Built-In Functions**

- String Functions
- Math Functions
- Date and Time Functions

- **Debugging**

- Why Debug
- Types of Bugs
- Stepping Through Code
- Watching Variable Values

- **Regular Expression**

- **Methods**

- **Objects**

- **Introduction to Objects**

- What are Objects?
- Properties Defined
- Methods Defined
- Events Defined
- Referencing Objects
- Properties
- Classes
- Keywords
- Working with Test Objects and Object Repositories
- Object Repository Introduction
- How Objects are added into OR
- Identifying the Objects
- Viewing the Object Properties
- Object Repository Modes
- Per-Action vs. Shared Object Repository

- Object SPY
- OI Introduction
- User Defined Objects
- Smart Identification
- Managing Object Repositories
- Merging Shared Object Repositories
- Associating Shared Object Repositories to a Test
- Merging Object Repositories

- **Synchronization**

- What is Synchronization?
- Synchronizing Your Tests
- Synchronization Methods
- Adding Wait Property Method
- Adding Wait Method, Adding Exist method
- Adding Sync Method
- Global Synchronization Settings
- Browser vs. Page Sync()
- Web Event Recording Configuration

● Checkpoints

- Introduction
- Adding Checkpoints while recording
- Types of Checkpoints
- Standard Checkpoint
- Text Checkpoint, Text area Checkpoint
- Bitmap Checkpoint
- Database Checkpoint
- Accessibility Checkpoint
- XML from Resource Checkpoint
- XML from Application Checkpoint
- Page Checkpoint, Table Checkpoint
- Image Checkpoint
- Updating Checkpoints at run time

● Output Values

- Introduction
- Types of Output Values

- Creating Output values
- Storing output values

- **Actions**

- Introduction to Actions
- Types of Actions, Creating Actions
- Inserting Call to Actions
- Insert Call to Copy of Action
- Insert Call to Existing Action
- Splitting Actions
- Input and Output Parameters
- Action Template

- **Parameterization Tests and Data Driven Tests**

- What is Parameterization?
- Parameterizing a Test Manually
- Parameterizing Using Actions
- Parameterizing Using Data Tables
- Parameterizing Using Environment Variables

- Built-in Environment Variables
- Internal Environment variables
- External Environment Variables
- Parameterizing Using Random Number

- **Working with Data Tables**

- Introduction
- Working with global and Action Sheets
- Editing and Saving Data Tables
- DataTable Methods
- Data Tables and Database
- Importing and Exporting Data to/ from Spread Sheet

- **Regular Expression**

- Introduction to Regular Expressions
- Defining Regular Expressions
- Running and Analyzing Regular Expressions
- Regular Expression Characters
- When to use Regular Expressions in QuickTest

- **Functions**

- Introduction
- Creating User-Defined Functions
- Advantages if Using functions
- Creating generic Functions
- Function Decomposition
- Read from Excel
- Write to Excel
- Step Generator

● **Recovery Scenarios**

- Introduction to Trigger Events
- When to use Recovery Scenarios?
- Default Recovery Scenarios
- Recovery Function call
- Recovery Scenario Manager
- Error Handling
- Creating Recovery files
- Associating Recovery files

● **Virtual Objects**

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- Introduction
- What is Virtual Object?
- Creating Virtual Object
- Virtual Object Manager
- Entire Parent hierarchy
- Parent only

- **Mapping User-Defined Test Object Classes**

- Introduction
- Object Mapping
- Standard Classes

- **Debugging in QuickTest**

- Establishing our Debugging Configuration
- Using Break Points
- Step Into, Step Out and Step Over
- Debug viewer Pane
- Working with Watch Expressions Tab
- Working with the Variables Tab

- Working with the Command Tab

- **Library Files**

- Associating a Library globally with a test
- Dynamically Loading libraries locally at run-time
- Dynamically Loading libraries globally at run-time
- Applicability of Option Explicit

- **Working with Databases**

- Introduction
- Checking the state of Connection or Recordset
- Database Connectivity
- MS Access, SQL Server and Oracle
- Exporting the results of a query to DataTable

- **Working with Flat Files**

- Introduction
- Types Flat Files, Modes of Flat Files
- Advantages FSO

- **Utility Objects**

- The Crypt Object
- The Optional Step Object, The PathFinder Object
- The SystemUtil Object, The RegisterUserFunc Object
- The Services Object, With— End with
- Transactional Statements

● QTP Automation Object Model

- Introduction
- Automation QuickTest Operations
- When to use AOM Scripts
- How can we use AOM to launch QuickTest on Remote Machine

● HTML DOM

- What is HTML?
- When to use HTML DOM?
- When not to use HTML DOM?
- HTML DOM Objects
- JavaScript Events and Actions
- Converting a DOM object QTP Test Object

● Working With Web Tables

- Introduction
- Accessing the web tables
- Clicking on inside the web table
- Row count
- Column Count
- GetCellData
- ChildItemsCount
- **Working with MS Excel and MS Word**
 - Introduction
 - The Excel Automation Object Model
 - The Word Automation Object Model
- **Descriptive Programming**
 - Introduction
 - Advantages of Descriptive Programming
 - When to use Descriptive Programming
 - Descriptive Programming syntax
 - Using description objects
 - The micclass Identifier

- Converting OR based script to a DP-based script
- Types DP/PD Methods

- **Implementing Test Automation Frame Works in Real Time Project**

- Introduction
- Design Guidelines
- Advantages of Frame Work
- Types of Automation frameworks
- Support different application versions
- Implementing in Real-Time Environment
- Disadvantages of frameworks

- **Automation Project**