MODULE 4 ST-DEFECT MANAGEMENT

1.What is Automation Testing?

Automation Testing involves using specialized software tools to execute test cases, compare actual results with expected outcomes, and identify defects without manual intervention. It aims to improve efficiency, increase test coverage, and ensure higher accuracy. Popular tools for automation testing include Selenium, QTP/UFT, Appium, and TestComplete.

2.Which Are The Browsers Supported By Selenium Ide?

Selenium IDE (Integrated Development Environment) supports the following browsers:

- **Google Chrome**
- **Mozilla Firefox**

It is available as an extension for both browsers and is primarily used for recording, editing, and debugging test cases.

3.What are the benefits of Automation Testing?

- **Faster Execution**: Automation tests execute faster than manual testing, saving time.

- **Increased Accuracy**: Reduces human error by running pre-scripted tests consistently.

- **Reusable Test Cases**: Test scripts can be reused for different versions of the application.

- **Improved Test Coverage**: Allows testing of complex scenarios and multiple test cases simultaneously.

- **Cost-Effective in the Long Run**: While initial setup is expensive, automation saves money in repetitive testing phases.

- **Supports Continuous Testing**: Essential for DevOps and agile environments, enabling frequent builds and releases.

4.What are the advantages of Selenium?

- **Open Source**: Free to use with a large supportive community.

- **Supports Multiple Browsers**: Compatible with Chrome, Firefox, Safari, Edge, and more.
- **Supports Multiple Programming Languages**: Works with Java, Python, C#, Ruby, and JavaScript, providing flexibility.
- **Platform Independent**: Runs on Windows, macOS, and Linux.
- **Integration Friendly**: Works well with CI/CD tools like Jenkins and version control systems like Git.
- **Parallel Test Execution**: Enhances efficiency by running multiple tests simultaneously.
- **Extensive Support for Add-Ons**: Easily customizable through libraries and plugins.

5.Why testers should opt for Selenium and not QTP?

- **Cost**: Selenium is free and open-source, while QTP (UFT) is a paid tool.

- **Language Support**: Selenium supports multiple programming languages, whereas QTP primarily supports VBScript.
- **Browser Compatibility**: Selenium supports a wider range of browsers compared to QTP.
- **Platform Independence**: Selenium is cross-platform, while QTP is limited to Windows.
- **Community Support**: Selenium has a larger and more active community.
- **Integration**: Selenium easily integrates with modern development environments and tools, making it ideal for agile practices.
- **Lightweight**: Selenium is simpler to set up and use compared to QTP, which has heavier installation and licensing requirements.

By choosing Selenium, testers can leverage its flexibility and cost-effectiveness, making it a preferred tool for web application testing.