**Module-4**

**[Automation Core Testing (Load Runner Up and Selenium IDE)]**

1. **Which components have you used in Load Runner?**

The components used in Load Runner are:

* Virtual user Generator
* Controller
* Analysis

1. **How can you set the number of Vusers in Load Runner?**

Steps to set number of Virtual users in load runner:

* Open the controller
* Create a new scenario
* Click on design tab in controller
* Click on add scripts and select the appropriate scripts
* Got to scenario groups or Vusers section
* In the number of virtual users column next to the script
* Enter the number of Vusers to execute it.

1. **What is Correlation?**

Correlation is the process of handling dynamic values returned by the server during test execution. The dynamic values include authentication tokens, session IDs, timestamps, etc. dynamic values are unique for each user session or transaction.

1. **What is the process for developing a Vuser Script?**

Steps for developing a Vuser script are:

* Plan and understand user scenarios and performance goals.
* Record the user actions using VuGen
* Enhance the script with parameterization, correlation and checkpoints.
* Debug and replay the script to ensure accuracy
* Configure runtime settings for realistic load simulation
* Execute the script in the controller under load.
* Analyze the results to assess performance and bottleneck.

1. **How Load Runner interacts with the application?**

Load Runner interacts with the application being tested by simulating user activity and measuring system performance. It’s working consists of the following:

* Protocol based simulation
* Virtual user simulation
* Load Generation
* Controller to manage load and test execution
* Response monitoring
* Analysis and Bottleneck Identification

1. **How many VUsers are required for load testing?**

The number of Virtual users required for load testing depends on several factors. Some factors to determine the appropriate number of Vusers are listed below:

* Define the Objective of the test
* Determine Real-World User Load
* Consider the application’s critical transactions
* Estimate based on System Capacity
* Expected user traffic.

1. **What is the relationship between Response Time and Throughput?**

Response time is the time taken for a system to respond to a user’s request, whereas, Throughput is the number of transactions or requests the system can process in a given time.

* As throughput increases, more requests are processed by the system in given time period. However, the stability of response time depends on how efficiently the system can handle the load.
* But when system starts getting overloaded with the continues rise in response time starts to increase due to inefficient load handling by the system.
* When throughput exceeds the system capacity, the response time spike significantly, leading to performance degradation, timeouts or errors.

1. **What is Automation Testing?**

Automation testing is the process of using specialized software tools to execute test cases automatically, compare actual outcomes with expected results and report on the results without human intervention.

1. **Which are the Browsers Supported by Selenium Ide?**

Selenium IDE supports only Google Chrome and Mozilla Firefox.

1. **What are the benefits of Automation Testing?**

Benefits of Automation Testing:

* It has wider test coverage of application features
* It ensures consistency
* It is around 70% faster than manual testing
* It improves accuracy
* it doesn’t require human intervention while executing.
* It increases efficiency
* It has better speed in executing testing
* The test scripts are re-usable
* It gives more time to market the product
* It allows more cycles of execution

1. **What are the advantages of Selenium?**

Advantages of Selenium are:

* It is open source and free of charge
* It is highly extensible
* It can run tests across different browsers
* It supports various operating system
* It supports mobile devices
* It can execute tests in parallel

1. **Why testers should opt for Selenium and not QTP?**

|  |  |
| --- | --- |
| **Selenium** | **QTP** |
| Highly extensible | Limited add-ons |
| Open source and free of charge | Commercial |
| Can run tests across different browsers | Can only run tests in Firefox, chrome & internet explorer |
| Supports mobile devices without 3rd party software | Supports mobile using 3rd party software |
| Supports various OS | Can only be used in windows |
| Can execute tests while the browser is minimized | Needs to have the application under test |
| Can execute tests in parallel without any charges | Can execute in parallel only using Quality Center, a paid product. |

1. **What is priority?**

Priority defines the order in which a defect will be resolved. It is set by the tester to the developer mentioning the time frame to fix the defect. It is relative and business focused.

1. **What is severity?**

Severity is the extend to which the defect can affect the software. It defines the impact that a given defect has on the system. It is absolute and customer-focused.

1. **Difference between Priority and Severity**
2. **Advantage of Bugzilla.**

Advantages of Bugzilla are:

* It has advanced search capabilities
* It provides e-mail notifications
* It files bugs by e-mail
* It keeps the track of time
* It modifies the bugs by e-mail
* It provides strong security
* It allows customization.
* Localization is also a key feature of Bugzilla