Module-4 Automation Core Testing (Load Runner Up and Selenium IDE)

● Which components have you used in Load Runner?

Virtual User Generator

Controller

Analysis

● How can you set the number of Vusers in Load Runner?

Steps to Set the Number of Vusers in LoadRunner:

1. **Open LoadRunner Controller:**
   - Launch the Controller from the LoadRunner suite.
2. **Create or Open a Scenario:**
   - You can start a new scenario or open an existing one.
3. **Add a Script:**
   - Click "Add Script" and select the script you want to test with.
4. **Set Number of Vusers:**
   - In the "Groups" pane, you'll see your script listed.
   - Under the Vusers column, enter the number of virtual users you want to simulate for that script.
     - Example: Enter 100 to simulate 100 users.
5. **Configure Load Generation (optional):**
   - You can distribute the Vusers across multiple load generators if needed.
6. **Set Run-Time Settings:**
   - Configure pacing, think time, iterations, and other runtime settings.
7. **Start the Test:**

o **Click "Start Scenario" to begin running the test with the specified number of Vusers.**

● What is Correlation?

Correlation is a statistical technique used to measure and describe the relationship between two variables.

In Testing Terms:

Correlation helps in identifying patterns or dependencies between different test metrics. For example:

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- **If CPU usage increases as the number of users increases, there is a positive correlation.**
- **If response time increases as server memory decreases, there may be a negative correlation.**

● What is the process for developing a Vuser Script?

1. **Create a new script**
2. **Record user action**
3. **Enhance the script**
4. **Add parameters**
5. **Run and debug:**
6. **Correlation:**
7. **Runtime settings**
8. **Scenario execution**
9. **Analysis of results**

● How Load Runner interacts with the application?

1. Virtual User (VUser) Simulation:

LoadRunner creates virtual users that represent real users interacting with the application.

2. Script Creation:

Users create scripts that define the actions a VUser will take, such as logging in, browsing pages, or submitting forms.

3. Load Generation:

LoadRunner executes the scripts, sending requests to the application and simulating user behavior under load.

4. Performance Monitoring:

While the load is being generated, LoadRunner monitors key performance metrics like response times, throughput, and resource utilization.

5. Analysis and Reporting:
After the test, LoadRunner analyzes the collected data and generates reports to identify performance bottlenecks, such as slow response times or high resource usage.

● How many VUsers are required for load testing?

The number of Virtual Users (VUsers) required for load testing depends on the application under test, the test objectives, and the resources available. There's no one-size-fits-all answer, but it's generally recommended to start small and increase the number of VUsers gradually to identify performance bottlenecks. Some testing tools like Azure Load Testing can handle up to 100,000 virtual users, LoadFocus suggests starting with 1 VUser and increasing gradually,

and SmartBear recommends distributing tests across multiple machines for large-scale tests.

● What is the relationship between Response Time and Throughput?

Response time and throughput are related. The response time for an average transaction tends to decrease as you increase overall throughput. However, you can decrease the response time for a specific query, at the expense of overall throughput, by allocating a disproportionate amount of resources to that query.

● What is Automation Testing?

Automation testing is a software testing method that uses specialized tools and scripts to automatically execute predefined tests, reducing or eliminating human intervention.

● Which Are The Browsers Supported By Selenium Ide?

Selenium IDE, a record-and-playback tool, supports Google Chrome, Mozilla Firefox, and Microsoft Edge.

● What are the benefits of Automation Testing?

Efficiency.
Productivity.
Cost Savings.

Compliance.

Reduced Errors.

Customer Satisfaction.

Increasing Employee Satisfaction and Retention.

Eliminate Paper-Based Processes.

● What are the advantages of Selenium?

Very easy to use and install.

No programming experience is required, through knowledge of HTML and DOM are needed

 Can export tests to formats usable in Selenium RC and WebDriver

Has built-in help and test results reporting module.

Provides support for extensions.

● Why testers should opt for Selenium and not QTP?

Testers might prefer Selenium over QTP (now UFT) due to its open-source nature, broader browser support, and more flexible programming language options.

Selenium is OS independent and allows test scripts to run across all browsers.

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