**Tops Technologies**

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

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

The three main components of Load Runner are: Virtual User Generator (VuGen), Controller and Analysis.

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

To set the number of Vuser in Load Runner, you can configure the goal setting in the Goal Definition For pane:

1. Click the drop-down arrow in the Goal Definition For Pane:
2. Select a goal type.
3. Enter the desired number of Vusers to run.
4. Enter a minimum-maximum range of Vuser for the scheduler to run.

* In the Run Dashboard, Select More > Add Group (available in the Graphs view, Groups view and Transaction view). The Add Group dialog box opens, enabling you to add a Vuser group. Enter a group name, select a script, enter the number of Vusers to run.
* **What is Correlation?**

Correlation is a statistical measure that expresses the extent to which two variables are linearly related (They change together at a constant rate).

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

The process for developing a Vuser Script involves the following steps:

* **Record the script:** Use a tool like Virtual User Generator (VuGen) to record the script.
* **Playback and improve:** Review the recorded script and make any necessary improvements.
* **Define and test parameters:** Define and test the various run-time parameters.
* **Use in a scenario:** Use the script in a LoadRunner scenario.
* **How Load Runner interacts with the application?**

LoadRunner interacts with an application by simulating user activity and recording the application’s performance.

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

You can start with 100 VCUs and increase to 10,000 VCUs to see how your system scales.

Cost-Effective: Instead of hiring thousands of real users to test a website, VCU provides an economical way to simulate high traffic.

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

Response Time and Throughput are related. As throughput increases, the average response time decreases. However, you can reduce the response time for a specific query by allocating more resources to it, which can be decrease overall throughput.

* **What is Automation Testing?**

Automation testing is a software testing technique that automates the process of validating the functionality of software and ensures it meets requirements before being released into production. With automated testing, an organization can run specific software tests at faster pace without human tester.

* **Which Are the Browsers Supported by Selenium Ide?**

Selenium IDE is a browser extension that works with the following browser:

Google Chrome, Mozilla Firefox, and Microsoft Edge.

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

Automation Testing has many benefits, including:

**Improved accuracy**

Automated tests perform the same steps every time, eliminating human error.

**Faster feedback**

Automation testing provides immediate insights into the impact of new features or changes.

**Increased test coverage**

Automation testing can run more test cases, including lengthy tests that are often avoided manually.

**Better resource allocation**

Automation testing frees up QA teams to focus on more complex tasks.

**Cost savings**

Automation tests are faster than manual tests and can be run repeatedly at no additional cost.

**Improved consistency**

Automated tests can be run consistently and repeatedly, ensuring that the software is tested under the same condition each time.

**Supports CI/CD**

Automation testing can be used in Continuous Integration and Continuous Delivery (CI/CD) pipelines to provide immediate feedback on code changes.

**Helps catch bugs early**

Automated UI testing can help developers catch bugs earlier in the development process.

**Reduces time to market**

Automation testing can reduce the time it takes to get a product to market.

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

Selenium has many advantages, including:

**Open source**

Selenium is free and open source, so there are no licensing costs. Anyone can download and use the source code, and it can be modified to meet project needs.

**Supports multiple languages**

Selenium supports many programming languages, including Java, Python, C#, and Ruby. This allows developers and testers to use a language they are familiar with.

**Support multiple browsers**

Selenium can run scripts across multiple browsers without requiring rewriting scripts for each browser.

**Reusable test suites**

Selenium automated tests can be reused, so you don’t need to start over each time you want to test.

**Easy to implement**

Selenium has a user-friendly interface and flexible implementation.

**Strong community support**

Selenium has a large community that provides regular updates and upgrades, as well as documentation and learning resources.

**Integrates with other tools**

Selenium integrates with popular tools like SC compilers, clouds-grids, and CI system.

**Early defect detection**

Selenium can help find defects earlier.

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

Selenium, however, supports a wide range of programming languages. QTP/UFT test scripts run only on the windows environment. They cannot not be run across all browsers. On the other hand, Selenium is OS independent and allows test scripts to run across all browsers.