**Module - 4 Automation core testing (Load runner up and Selenium IDE)**

1. **Which components have you used in load runner?**

* Virtual User Generator (V U Generator): V U Generator is used to create scripts that simulate the actions of real users interacting with your application. It records user actions and allows you to enhance and parameterize the script as needed.
* Controller: The Controller component is used to organize, execute, and monitor performance tests. It allows you to define scenarios, allocate resources, set up load generators, and start or stop tests.
* Analysis: The Analysis component is used to analyze the results of performance tests. It provides various graphs, reports, and statistics to help you understand the behavior of the system under different load conditions.

1. **How can you set the number of V Users in load runner?**

* In that grid there's also a column for "V users". For your script the value will be set to 1 by default. If you want to increase that number, just double-click on the grid to edit the value.

1. **What is correlation?**

* Correlation in performance testing is used to account for dynamic values many web applications have dynamic data that changes every time the user runs that web application. Web applications often need to track user’s interactions as they navigate through their website while preserving their state between navigations.

1. **What is the process for developing a Virtual user script?**

* Step 1- Record the V user Script.
* Step 2- Playback and improve the recorded v user script.
* Step 3- Define and test the different run-time parameters.
* Step 4- Use the script in a LoadRunner scenario.

1. **How load runner interacts with the application?**

* LoadRunner simulates user activity by generating messages between application components or by simulating interactions with the user interface such as key presses or mouse movements. The messages and interactions to be generated are stored in scripts

1. **How many V Users are required for load testing?**

* Time taken for 1 user to complete 1 transaction: [a] + [b] + [c] = 6 second In 1 hour a user can do: 60\*60/6 = 600 transactions To do 280,000 transactions per hour, we need: 280,000/600 = 467 V Users After identifying the scripts and the total VUsers, plan the LoadRunner test scenario for the same.

1. **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.

1. **What is automation testing?**

* Automation testing to the use of specialized software tools and scripts to execute test cases and compare actual outcomes with expected outcomes. It involves automating the manual testing process, where repetitive tasks, such as regression testing, functional testing, and performance testing, are performed automatically.

1. **Which are the browsers supported by selenium ide?**

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1. **What are the benefits of automation testing?**

* Saving Costs.
* Faster Feedback Loop.
* Better Allocation of Resources.
* Guarantees higher accuracy
* Increased test coverage
* Detects bugs earlier
* Test at scale
* Maximizes ROI

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

* Open source, free to use, and free of charge
* Highly extensible
* Can run tests across different browsers
* Supports various operating systems
* Supports mobile devices
* Can execute tests while the browser is minimized to be visible on the desktop
* Can execute tests in parallel

1. **Why testers should 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 be run across all browsers. On the other hand, Selenium is OS independent and allows test scripts to run across all browsers.