# Module – 4

# Automation Core Testing

# (Load Runner Up and Selenium IDE)

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

* **The components of Load Runner are we used in load runner is :** 
  + Load Runner,Virtual User Generator, Controller, and the Agent process, Analysis
* **Load Generator :** It is used to generate the load against the application by running the script.
* **VuGen :** It is used for generating and editing scripts.
* **Controller :** It is used to control, launch, and sequence the instance of a Load Generator.
* **Agent Process :** It is used to manage the connection between the Controller and Load Generator instances.
* **Analysis :** It assembles the logs from different load generators and formats the reports for visualization of results and monitoring data.

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

* You can set the number of Vusers in the controller section while creating your scenarios.
* Many other advanced options like ramp-up, ramp-down of Vusers are also available in the Controller section.

1. **What is Correlation?**

* Correlation is used to obtain data which is unique for each run of your test script.
* While recording, these dynamic values are hard-coded in your script causing the script to fail during playback.
* Correlation is a technique where dynamic values are not hard-coded in your script but are extracted at run-time to avoid failure.
* Correlation is used to define a relationship between two variables or entities.
* It is mainly used to take care of the data returned by the server.
* There are two correlations available in Load Runner.
  + They are manual and automated correlation.
* **Manual correlation:** In manual correction we have to identify the dynamic value and capture it from the response of the previous post.
* **Automated correlation:**In automated correction we have to work with the existing rules.

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

* There are four steps for developing a Vuser script.

1. Record the Vuser Script.
2. Playback / Enhance the recorded Vuser script.
3. Define the various run-time settings & check
4. Incorporate the script in a Load Runner scenario
5. **How Load Runner interacts with the application?**

* Protocol is used in Load Runner to interact with the application.

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

* The number of VUsers required depends on your system under test, network configurations, hardware settings, memory, operating system, software applications objective of a performance test.
* There can not be any generic value for Vuser.

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

* The Throughput shows the amount of data in bytes that the Vusers received from the server in a second.
* When It is compared with transaction response time, throughput and response time get decreased.
* The peak throughput and highest response time would occur approximately at the same time.

1. **What is the difference between hits/second and requests/second?**

* Hits /second mean the number of hits the server receives in one second from the Vuser.
* Request /second is the number of request the Vuser will request from the server.

1. **To test the Performance testing on “Tops Technologies website” :- https://www.tops- int.com/**
2. **to Record all top level menu**
3. **to Record minimum 10 Vuser on this website**
4. **save all (Script,Design,Graph)**
5. **create a normal script of above website with correlate using hp default website.**

****

**( Selenium IDE )**

1. **What is Automation Testing?**

* Automation Testing is a technique using an automation tool to write and execute tester’s test scripts and cases.
* The main goal of Automation Testing is to reduce the number of test cases to be run manually and not eliminate Manual Testing altogether.
* The primary goal of automated testing is to save time, effort, and money on repetitive tests that don’t change frequently.
* The process of using special software tools or scripts to perform testing tasks such as entering data, executing the test steps and comparing the results, etc. is known as Automation testing.

1. **Which Are The Browsers Supported By Selenium Ide?**

* Selenium IDE supported Firefox and Chrome browsers.
* Selenium IDE has add-ons for Firefox.

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

* Automated testing has numerous potential benefits.
* **Benefits of Automation testing:**

1. 70% faster than the manual testing
2. Wider test coverage of application features
3. Reliable in results
4. Ensure Consistency
5. Saves Time and Cost
6. Improves accuracy
7. Human Intervention is not required while execution
8. Increases Efficiency
9. Better speed in executing tests
10. Re-usable test scripts
11. Test Frequently and thoroughly
12. More cycle of execution can be achieved through automation
13. Early time to market
14. **What are the advantages of Selenium?**

* **Advantages of Selenium :**

1. Selenium is an Open Source Software.
2. Selenium supports various programming languages to write programs (Test scripts)
3. Selenium supports various operating systems (MS Windows, Linux, Macintosh etc...)
4. Selenium supports various Browsers (Mozilla Firefox, Google Chrome, IE, Opera, Safari etc...)
5. Selenium supports Parallel Test Execution.
6. Selenium uses fewer Hardware resources.
7. Selenium Test Case Execution time is faster than other tools like UFT, RFT, Test Complete, Silk Test, etc.
8. Test cases can be executed while the browser window is minimized.
9. **Why testers should opt for Selenium and not QTP?**

* Selenium is an open-source tool suite. But QTP is a commercial tool, and each license has to be purchased.
* Selenium can be extended for technologies that work with DOM. But QTP has a limited number of add-ons and needs extra add-ons for other technologies.
* Selenium can execute scripts on different browsers. But QTP can run tests only in specific versions of Firefox, Chrome, and IE.
* Selenium can execute test scripts across various operating systems. But QTP can work only on Windows.
* Selenium has mobile device support in itself. But QTP supports mobile devices only with the support of other third-party tools.
* Selenium executes tests within the browser, so not much attention is needed during script execution. But QTP tool acts by mimicking user actions on the browser; hence it needs attention from the tester.
* Selenium can run tests in parallel with Selenium Grid. But QTP cannot run tests in parallel by itself, and another commercial tool called HP Quality Center or QC is needed.
* Selenium supports web applications only. But QTP can run tests for both desktop and web applications.
* Selenium does not support Object Repository or Recovery Scenarios. But QTP has object repository and recovery scenarios built-in.
* Selenium cannot access the controls of the browser itself. But QTP has complete access to the controls within the browser, the favorites bar, backward and forward buttons, etc.
* Selenium does not have a built-in test report generation system. But QTP has a test result generation system within the tool itself by default.
* Selenium users must rely on the programming language for parameterisation. But QTP has a built-in parameterisation system which is easy to implement.

1. **To validate the tops technologies website Contact us page and enter your friend detail at last “Guest Call Back”** https://www.tops-int.com/contact-us/
2. **To use assert**
3. **To use click and wait**
4. **To use locators**
5. **To use other command**