**ST - Automation and Selenium**

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

* Load Generator
* VuGen
* Controller
* Analysis

1. **How can you set the number of V-users in Load Runner?**

* Set the number of V-users in the controller section while creating the scenarios,

When Creating Scenario in Controller we have to add the particular script which we want to run. There we have to set the number of V-users to run for that script. but you have to add V-users depending on the Load Runner license for how many V-users it supports.

1. **What is Correlation?**

* **Correlation-** is the capturing of dynamic values passed from the server to the client and back. We save this captured value into a load runner parameter, and then use this parameter in the script in place of the original value.

1. **What is the process for developing a V-user Script?**

* Record the V-user script
* Playback and improve the recorded v-user script
* Define and test the different run time parameters
* Use the script in a load runner scenario

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

* Load Runner 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?**

* **The number of V-Users required depends on your system under test, network configurations,**

**hardware settings, memory, operating system, software applications objective of a performance test.**

**There cannot be any generic value for V-user.**

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

* **There is an inverse relationship between response time and throughput. As the system &amp; #39; s**

**workload increases, the response time typically increases while the throughput decreases. This is**

**because as the system becomes busier, it may take longer to respond to each individual request, and**

**it may not be able to process as many requests simultaneously.**

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| **Response Time** | **Throughput** |
| **Response time refers to the amount of time it takes for a system to respond to a request or to complete a task. It is usually measured seconds,**  **milliseconds, or microseconds.**  **Response time is an important metric because it directly affects the user experience. A system with a fast response time is generally more desirable than a slow one.** | **Throughput, on the other hand, refers to the amount of work that can be completed by a system over a given period of time. It is usually measured in transactions per second (TPS), requests per second (RPS), or bytes per second (BPS). Throughput is an important metric because it represents the system & amp; #39; s ability to handle a large number of requests or**  **transactions in a given time frame.** |

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

* **Hits per second is a more accurate measure of server performance, as it takes into account the**

**actual content that is being served to clients. However, requests per second can be a useful metric**

**for identifying issues such as high levels of traffic or requests for non-existent files, which can put**

**strain other server and lead to slower response times.**

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| **Hits/Second** | **Requests/Second** |
| **Hits per second (HPS) refers to the number of times a web server sends a file to a client in response to a request. A hit can be any type of file, such as an HTML page, an image, a video, ora script. For example, if a client requests a webpage that contains five images, the server would register six.**  **hits: one for the HTML page and one for**  **each of the five images** | **Requests per second (RPS), on the other hand, refers to the number of requests that a server receives from clients in a given time period. A request can be for any type of file, and may result in one or more hits depending on the content of the file.** |

1. **What is Automation Testing?**

* **Automation testing-** is a type of software testing that involves automated test case executing using an automation tool, basically, it automates the manual testing process. The tester writes test scripts and then runs the test scripts either on-demand or schedule them for periodic executions. This reduces the overall testing time, thus helping in faster product releases.

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

The following browsers support selenium:

* Google chrome, safari, Mozilla Firefox, and internet explorer.

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

* Faster Feedback Cycle
* **Testing on Multiple Platforms in Parallel**
* **Reusability of Test Scripts**
* **Easy Data-driven Testing**
* **Maximum Test Coverage**
* **Scalability**
* **Enhance the Quality of Manual Testing**
* **Effective Smoke Testing**
* **Better Regression Testing**
* **Reduce the Time to Release**

1. **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
* Provides support for extensions.

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

* Selenium is an open source whereas QTP is a commercial tool, Selenium is used specially for testing web-based applications while QTP can be used for testing client server application also Selenium supports Firefox, IE, Opera, Safari on operating systems like Windows, Mac, Linux etc. however QTP is limited to Internet Explorer on Windows.  
  Selenium supports many programming languages like Ruby, Perl, Python whereas QTP supports only VB script.