**SOFTWARE TESTING ASSIGNMENT**

**MODULE-4**

* Which components have you used in Load Runner?

Generally load runner having three main components, those are shown in below,

1. Vrug(Virtual User Generator)

loadrunner controlGenerally load runner having three main components, those are shown in below,

Vrug(Virtual User Generator)

loadrunner controler

loadrunner analyzer

loadrunner analyzer

Vrug(Virtual User Generator):By using these we can record the script and enhancement the script those are do the parametizition and correlation.

Loadrunner controller:Where we can configure and do load test scenarios using the recorded script from Vuug.

Loadrunner analyzer:These can be used for analysis and generating the reports at the controller after test execution.

Remaining having two components, those are load generator and agent processor

Load generator:Load generator which is generates the load from controler and having bettwen the servers and agent processer.

Agent processer:Which is bettwen load controler and load generator,by using these we can generate the load .

* **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.

* 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 LoadRunner parameter, and then use this parameter in the script in place of the original value.

Correlation, as the name suggests, is a mechanism of defining a relationship between two variables or entities. A Dictionary defines it as “statistical relation between two or more variables such that systematic changes in the other accompany systematic changes in the value of one variable”.

* What is the process for developing a Vuser Script?

**There are 5 steps for developing a vuser script.**

1.recording the vuser script .

2.edit the vuser script.

3.runtime setting .

4.run the vuser script in stand-alone mode.

5.incorporate the vuser script into a load runner scenario..

* 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 keypresses or mouse movements**. The messages and interactions to be generated are stored in scripts.

* How many VUsers are required for load testing?

While many variables affect accuracy, the number of concurrent virtual users is one of the most important. Ideally, you could test with as many virtual users as you need. In practice, this may be too expensive because [load testing](https://www.microfocus.com/en-us/what-is/load-testing) software is priced on the number of concurrent virtual users.

* 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. Conversely, you can maintain overall throughput by restricting the resources that the database allocates to a large query.

The trade-off between throughput and response time becomes evident when you try to balance the ongoing need for high transaction throughput with an immediate need to perform a large decision-support query. The more resources that you apply to the query, the fewer you have available to process transactions, and the larger the impact your query can have on transaction throughput. Conversely, the fewer resources you allow the query, the longer the query takes.

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

The exact meaning of those terms is context-sensitive. Normally, I'd consider "request" and "hit" to be synonymous. However, when talking about a caching webserver, a "hit" might refer to a cache hit (as opposed to a "miss").