**Module - 4**

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

* **Load runner is a GUI based tool and very easy to use. It consists of 5 components: -**

1. **Virtual user generator: -** **VuGen is LoadRunner’s first component to create, validate and modify scripts. VuGen allows the user to record the application’s flow that needs to be tested for load testing**
2. **Controller: -** **the controller is the second LoadRunner component, which generates ‘x’ amount of user load for the user’s application. The controller also monitors web, app and database servers during load testing**.
3. **Load Generator: -** **Load generator is used to generate load from a specific location or area. Users can use multiple load generators within the controller**.
4. **Agent Process: -** **these window services run on the load generator computer and facilitate communication between the controller and the generator.**
5. **Analysis: - this component of LoadRunner is used to create performance reports. The user has completed execution in the controller. Analytics create performance reports in various formats for e.g. HTML, excel, word, PDF or custom format.**

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

* **We can set the numbers of Vusers in the controller section while creating your scenario. Many other advanced options like ramp-up, ramp-down of Vusers are also available in the controller section.**

**• What is Correlation?**

* **‘correlation’ term refers to the handling of dynamic values coming from the server. These dynamic values are unique values that are generated by the server for security purpose like the session ID, authorization token etc. in some cases, dynamic values also refer to the web content like values in a drop-down list, calendar date, item ID, Product ID, order number etc. through correlation, you can capture these dynamic values and pass them in the subsequent requests. This is the basic concept of ‘correlation’ in LoadRunner.**

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

* **There are 5 steps foe 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?**

* **Protocol is used in LoadRunner to interact with the application.**

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

* **If we run a load test with 10000 virtual users, each making a request every 20 seconds (3 requests per minute) then you’re making 30,000 request per minute which equals 500 request per second.**

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

* **Response time: - this is the time difference between submission of a request until the response begins to be received.**
* **Throughput: - the number of processes that are completed per unit time is called the throughput.**

**It is desirable to maximize CPU utilization and throughput and to minimize turnaround time and response time.**

**• To test the Performance testing on “Tops Technologies website”: - https://www.saucedemo.com/**

**1. to Record all top-level menu**

**2. to Record minimum 10 Vuser on this website**

**3. save all (Script, Design, Graph)**

* **Scenario1**
* **Session1**

**• create a normal script of above website with correlate using hp default website.**

* **WebHttpHtml1**