1. What is Performance Testing?

==>Performance testing is non-functional testing that is used to determine how an application will work under load. Performance metrics such as speed, scalability, and stability are tested and compared with the benchmark set by the stakeholders.

2. Types of Performance Testing?

==>The different types of performance testing are:

* Stress testing

The application is tested under an extreme workload to determine the level of load at which the app crashes.

* Load testing

The application is tested under the workload generated in normal conditions to measure response time and fix any bottlenecks.

* Spike testing

The workload is changed rapidly, and the application’s response is monitored.

* Endurance testing

The application is exposed to the anticipated workload for an extended period to determine if it can handle a prolonged load.

* Volume testing

The application’s database is fed a large amount of data to determine the app’s data-processing efficiency.

* Scalability testing

The workload is gradually increased to determine how efficiently the app can scale up.

3. What is Jmeter and Advantages of Jmeter over other performance testing tools.

==>JMeter is a pure Java-based desktop application for performance testing and evaluating overall system performance under different loads. It works with many test category types such as load, performance, functional, regression etc.

Advantages of JMeter

1.Easy to use without extensive knowledge of programming. It has a user-friendly UI and one can also use CLI.

2.Provides integration with Jenkins and reporting

3.Easy installation on any operating system

4.Key features like the Thread Group, helps to see whether software performance is good.

5.Test IDE allows test recording from browsers or native applications

6.Allows API testing, Database Testing, and MQ testing with ease

7.When there’s a high number of TPS, one can achieve more transactions per second given the hyper-limitations.

4. What is Thread Group in Jmeter?

==>A Thread Group is a set of threads executing the same scenario. It is the base element for every JMeter test plan. There are multiple thread groups available which can be configured to simulate how the users interact with the application, how the load is maintained and over what period of time.

5. Write down and explain any 5 listeners present in Jmeter?

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1. Aggregate Graphs:

Aggregate graphs allow us to generate bar graphs easily and let us select graph display settings. The generated graph and table data can be saved explicitly in the form of PNG and CSV.

2.Aggregate Report:

Aggregate report shows a separate table row for each differently named sampler request in the test.

3.Assertion Results:

Assertion Results displays the results of assertions applied on the Sampler.

Note that Assertion Results SHOULD NOT BE USED during Load/Stress test as it consumes a lot of resources like memory and CPU. It is recommended to use it with functional testing or debugging purposes.

4.View Results In Table:

View Results in table creates and displays a row for every sample/request result separately.

Note that View Results In Table SHOULD NOT BE USED during Load/Stress test as it consumes a lot of resources like memory and CPU. It is recommended to use it with functional testing or debugging purposes.

5.View Results Tree:

View Results Tree displays a tree consists of all the Sampler responses along with their requests.

Note that View Results Tree SHOULD NOT BE USED during Load/Stress test as it consumes a lot of resources like memory and CPU. It is recommended to use it with functional testing or debugging purposes.

6. Explain How do you recorded/made your script in your language.

7. Why do we need to do performance testing?

==>Performance Testing is done to provide stakeholders with information about their application regarding speed, stability, and scalability. More importantly, Performance Testing uncovers what needs to be improved before the product goes to market. ... Hence, performance testing is important.