**Jmeter**

Open-source testing tool that is used for performance testing/Load testing.

Performance testing should only done for main path(that’s use more usual)

Give an example of amazon like there is Diwali sale so definitely there are multiple user so we need to make sure that how many no of user can it handles.

Pure java based application.

It have the GUI to create test plans and configure the elements.

It support scripting as well

Jmeter store test plan in XML format, it means you can generate the test plan using a text editor

Download.

Unzip

Bin Folder🡺 open Executable Jar file(Apache Jmeter)

**Video2**

**Performance Testing:-** Performance testing is defined as the type of software testing to ensure software applications that will perform well under their expected workload

**Connection Time :-** Time to connect to server from client.

**Response Time:-** Is a measure of how responsive an application is to a client request.

**Throghput time :-** Indicate the no. of transaction per second an application can handle.

**Scenarios:-** Base Work(that user will use most of the time) so that we can apply performance testing on that.

**BottleNeck:-** When server stuck at any point so that point is known as bottle Neck. Single part of system that prevent further processing or significantly degrades the performance of a system as a whole.

**Capacity:-** The degree to which a system can perform data processing until performance degrades.

**Concurrency:-** No of multiple users simultaneously going to hit the server

**Key Performance Indicator:** The set of target which expected performance within the performance system.

Using Jmeter we can do the testing of any application.

**Elements of J-Meter:**

1. Thread Group
2. Samplers
3. Listeners
4. Configuration

**First we create a Test Plan**- It’s a container which describe what to and how to test. A Complete test plan will contain one or more element such as the Thread, samplers and so on. It describes the behavior of the elements. Once we create the test plan we save it and run the test plan and analyze the test result from various format(table, graph, tree……)

**1:- Thread Group** is a collection of threads, each thread represents one user using the application under test basically each thread simulate one real user request and the control of thread group allow you to number of threads for each group

Let’s say you set the no. of threads as 5 so Jmeter will create and simulate 5 user’s requests to server under test.

**2:- Samplers:**

1. FTP Request (To download / upload the files)
2. HTTP Request (To sent an HTTP/HTTPS request to a web server )
3. JDBC Request (To executes database performance testing )
4. BSF Sampler (Allow you to write Sampler using a BSF scripting lang )
5. Access Log Sampler (Allow you to read access logs and generate HTTP request )
6. SMTP Sampler (To test Mail Sending)

It will inform the thread group to which type of request it will raise to server. Request can be any one from the above types.

**3:- Listeners** show the results of the test execution, they can show result in different format such as tree, table, graph, log or many other formats

**4:- Configuration**

1. CSV Data Set Config
2. HTTP Cookie set Manager
3. Login Config Element
4. HTTP Request Defaults
5. FTP Request Defaults