**Fall 2020 Mid-Term Assignment**

**Course name:** Software Verification & Validation

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**BSSE** : 6th Semester

Q: Choose any testing tool from the list, and write down its

1. Pros/cons
2. Functionality
3. Supporting languages
4. Supporting tests
5. Write a short (faulty) code, test using this tool and show the bugs in the code.
6. Selenium
7. Apache Jmeter
8. Load Runner
9. Test Studio
10. Bugzilla
11. Silk Test
12. Ncrunch
13. Firebug
14. Neoload
15. Load Ninja
16. Resharper

**Apache Jmeter**

Apache Jmeter is a Load testing software so we are testing website load through Apache Jmeter.

**Pros:**

• User Friendly

• Great Support

• Well Documented

• Records Keeping

• Reports Generate

• Its Open Source

**Cons:**

• Skilled Tester Required

• High Learning required

• Doesn’t support JavaScript

• Doesn’t Support AJAX Request

• Difficult to test CSRF Request

Languages and Protocols Support by Jmeter:

1. HTTP

2. JDBC

3. LDAP

4. SOAP

5. JMS

6. FTP

7. Java, NodeJS, PHP, ASP.NET

**(Functionality)**

Apache JMeter may be used to test performance both on static and dynamic resources, Web dynamic applications.

It can be used to simulate a heavy load on a server, group of servers, network or object to test its strength or to analyze overall performance under different load types.

Apache JMeter features include:

Ability to load and performance test many different applications/server/protocol types:

* Web - HTTP, HTTPS (Java, NodeJS, PHP, ASP.NET, …)
* SOAP / REST Webservices
* FTP
* Database via JDBC
* LDAP
* Message-oriented middleware (MOM) via JMS
* Mail - SMTP(S), POP3(S) and IMAP(S)
* Native commands or shell scripts
* TCP

**Java Objects .Languages and Protocols Support by Jmeter:**

1. HTTP

2. JDBC

3. LDAP

4. SOAP

5. JMS

6. FTP

7. Java, NodeJS, PHP, ASP.NET

**Supporting Test By Jmeter:**

• Jmeter is used for Website Load Testing , User Testing

* Jmeter have 4 basic elements:

1. Thread Group

2. Samplers

3. Listeners

4. Configuration

First we create test plan that what to and how to test.

**1. Thread Group:**

Create a thread group in which each thread Simulates a user.

**2. Samplers:**

Which type of test required is shows in the samplers. Which are FTP, HTTP and more.

**3. Listeners:**

Results are listeners in graphics mode

**4. Configuration:**

Data configuration just like for login 1000 users are required so 1000 users data configuration.