

Ex>No: 7	Introduction to JMeter and Setup JMeter Environment for Testing	
AIM:		
To Introduction to JMeter and Setup JMeter Environment for Testing		
ALGORITHM:		
<p>Step 1: Install Java JDK.</p> <p>Step 2: To check whether it is installed or not type this command “java -version” in command prompt.</p> <p>Step 3: Download JMeter.</p> <p>Step 4: Extract the JMeter.</p> <p>Step 5: Navigate to bin folder of the Apache JMeter folder.</p> <p>Step 6: Open jmeter.bat file in the bin folder to open JMeter in GUI mode</p>		

OUTPUT:

ORACLE

Java SE Development Kit 17.0.1 downloads

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications and components using the Java programming language.

The JDK includes tools for developing and testing programs written in the Java programming language and running on the Java platform.

Linux **macOS** **Windows**

Product/file description	File size	Download
Arm 64 Compressed Archive	171.13 MB	https://download.oracle.com/java/17/latest/jdk-17_linux-aarch64_bin.tar.gz (sha256)
Arm 64 RPM Package	153.36 MB	https://download.oracle.com/java/17/latest/jdk-17_linux-aarch64_bin.rpm (sha256)
x64 Compressed Archive	172.35 MB	https://download.oracle.com/java/17/latest/jdk-17_linux-x64_bin.tar.gz (sha256)
x64 Debian Package	148.02 MB	https://download.oracle.com/java/17/latest/jdk-17_linux-x64_bin.deb (sha256)
x64 RPM Package	154.78 MB	https://download.oracle.com/java/17/latest/jdk-17_linux-x64_bin.rpm (sha256)

JDK 17 Script-friendly URLs

The URLs listed above will remain the same for all JDK 17 updates to allow their use in scripts.

Learn more about automating the downloads of JDK 17.

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19043.1348]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91637>java -version
java version "17.0.1" 2021-10-19 LTS
Java(TM) SE Runtime Environment (build 17.0.1+12-LTS-39)
Java HotSpot(TM) 64-Bit Server VM (build 17.0.1+12-LTS-39, mixed mode, sharing)

C:\Users\91637>
```

Documentation

- Get Started
- User Manual
- FAQ
- Component Reference
- Functions Reference
- Properties Reference
- Change History
- Javadocs
- JMeter Wiki
- FAQ (Wiki)

Tutorials

- Distributed Testing
- Recording Tests
- JUnit Sampler
- Access Log Sampler
- Extended JMeter

Community

- Issue Tracking
- Security
- Mail Lists
- Source Repositories
- Building and Contributing
- Project info at Apache
- Contributors

Foundation

- The Apache Software Foundation (ASF)
- Get Involved in the ASF
- Sponsorship
- Thanks

Other mirrors: <https://idc01.apache.org/> | Change

The KEYS link links to the code signing keys used to sign the product. The PGP link downloads the OpenPGP compatible signature from our main site. The SHA-512 link downloads the sha512 checksum from the main site. Please verify the integrity of the downloaded file.

For more information concerning Apache JMeter, see the [Apache JMeter](#) site.

KEYS

Apache JMeter 5.4.1 (Requires Java 8+)

Binaries

[apache-jmeter-5.4.1.tgz sha512.gpg](#)
[apache-jmeter-5.4.1.zip sha512.gpg](#)

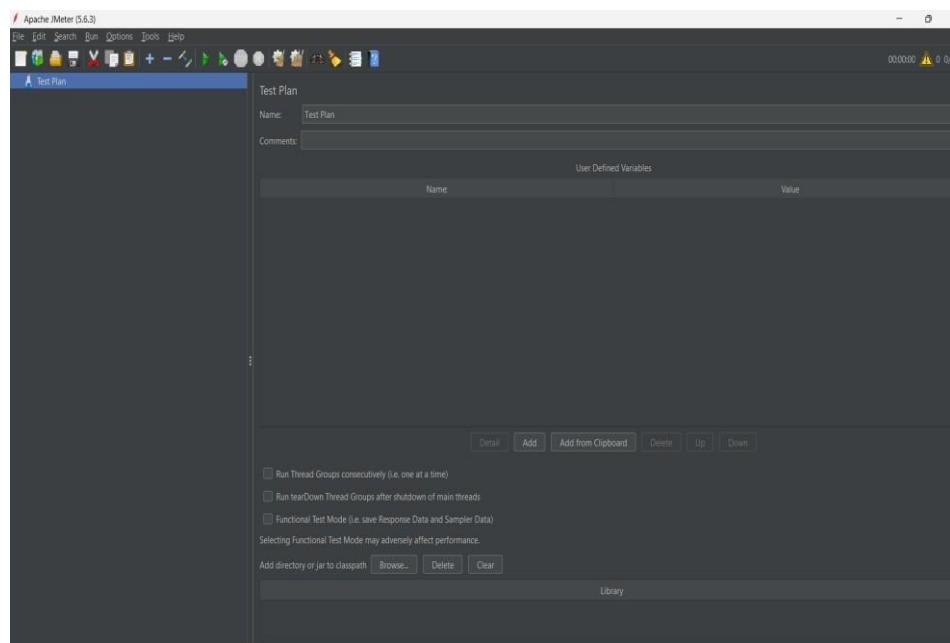
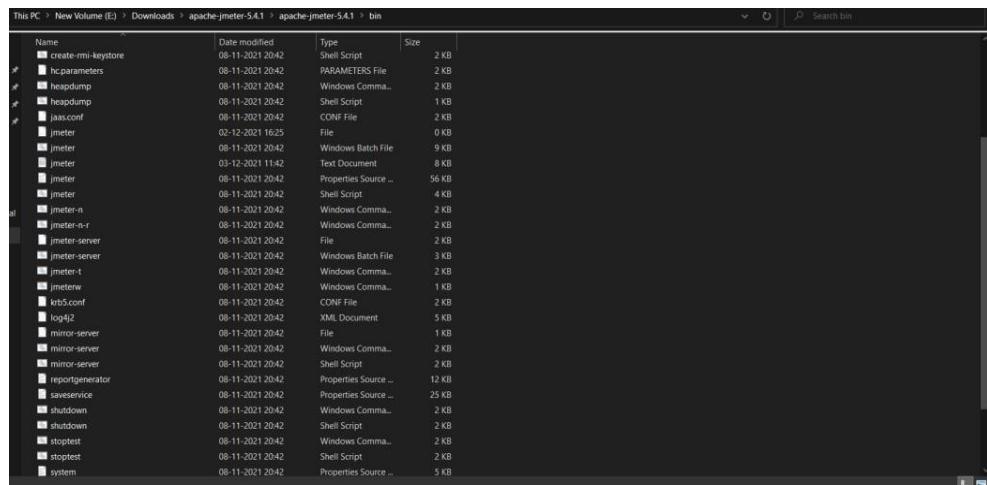
Source

[apache-jmeter-5.4.1_src.tgz sha512.gpg](#)
[apache-jmeter-5.4.1_src.zip sha512.gpg](#)

Archives

Older releases can be obtained from the archives.

https://idc01.apache.org/jmeter/binaries/apache_jmeter_5.4.1.zip • [browse download area](#)



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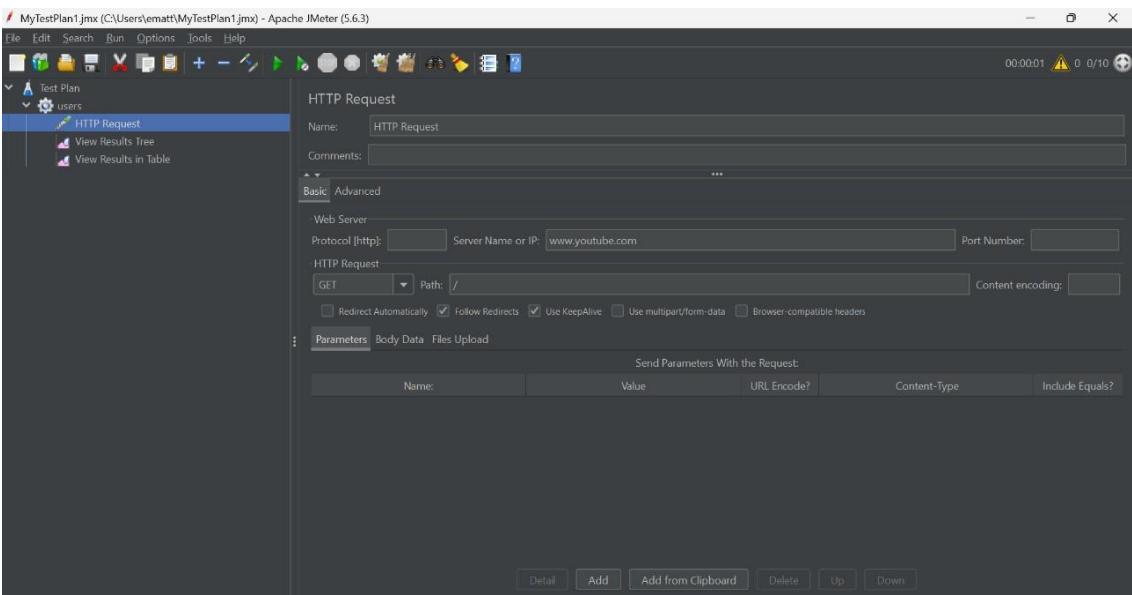
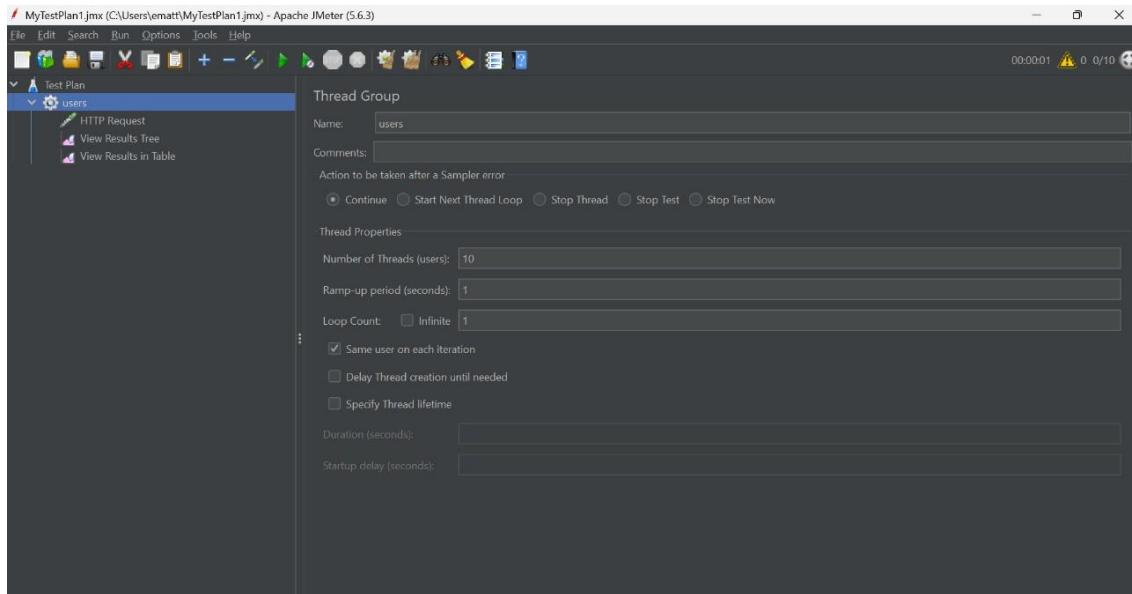
Particulars	Max Marks	Mark Secured
Program and Execution	15	
Viva	10	
Total	25	

RESULT:

Thus, the above JMeter tool has been executed successfully and the output was verified.

Ex>No: 8b	Use JMeter to perform Load Testing Using Youtube	
<p>AIM:</p> <p>To Use JMeter to perform Load Testing Using Facebook website</p> <p>ALGORITHM:</p> <p>Step 1: Open JMeter in GUI mode.</p> <p>Step 2: First you must create a test plan in the user interface of JMeter.</p> <p>Step 3: Next step is to add thread groups and specify the number of threads or users and loop count.</p> <p>Step 4: Once the thread group is created, next step is to add the HTTP Request and specify the server's name and path. Now save your Test Plan in any folder.</p> <p>Step 5: Add Table result.</p> <p>Step 6: Run and get the test result.</p>		

OUTPUT:



Sample #	Start Time	Thread Name	Label	Sample Time...	Status	Bytes	Sent Bytes	Latency	Connect Time...
1	10:26:02.273	users 1-1	HTTP Request	817	✓	530891	234	168	69
2	10:26:17.454	users 1-1	HTTP Request	392	✓	532564	234	117	22
3	10:26:17.558	users 1-2	HTTP Request	427	✓	521732	234	109	9
4	10:26:17.659	users 1-3	HTTP Request	383	✓	521011	234	104	9
5	10:26:17.761	users 1-4	HTTP Request	398	✓	529888	234	113	16
6	10:26:17.860	users 1-5	HTTP Request	428	✓	531832	234	94	7
7	10:26:17.962	users 1-6	HTTP Request	427	✓	520852	234	109	19
8	10:26:18.063	users 1-7	HTTP Request	443	✓	521537	234	107	12
9	10:26:18.166	users 1-8	HTTP Request	384	✓	520412	234	100	7
10	10:26:18.267	users 1-9	HTTP Request	394	✓	521996	234	114	9
11	10:26:18.371	users 1-10	HTTP Request	382	✓	531581	234	113	18
12	13:35:22.041	users 1-4	HTTP Request	1067	✓	530898	234	142	45
13	13:35:22.047	users 1-5	HTTP Request	1667	✓	519240	234	133	39
14	13:35:22.075	users 1-2	HTTP Request	2244	✓	520855	234	128	31
15	13:35:22.079	users 1-8	HTTP Request	2632	✓	519071	234	101	9
16	13:35:22.580	users 1-58	HTTP Request	2295	✓	530392	234	224	70
17	13:35:22.767	users 1-76	HTTP Request	2190	✓	518512	234	229	71
18	13:35:22.406	users 1-40	HTTP Request	2617	✓	530549	234	198	38
19	13:35:22.024	users 1-3	HTTP Request	3036	✓	530909	234	158	62
20	13:35:22.057	users 1-6	HTTP Request	3013	✓	520497	234	130	29

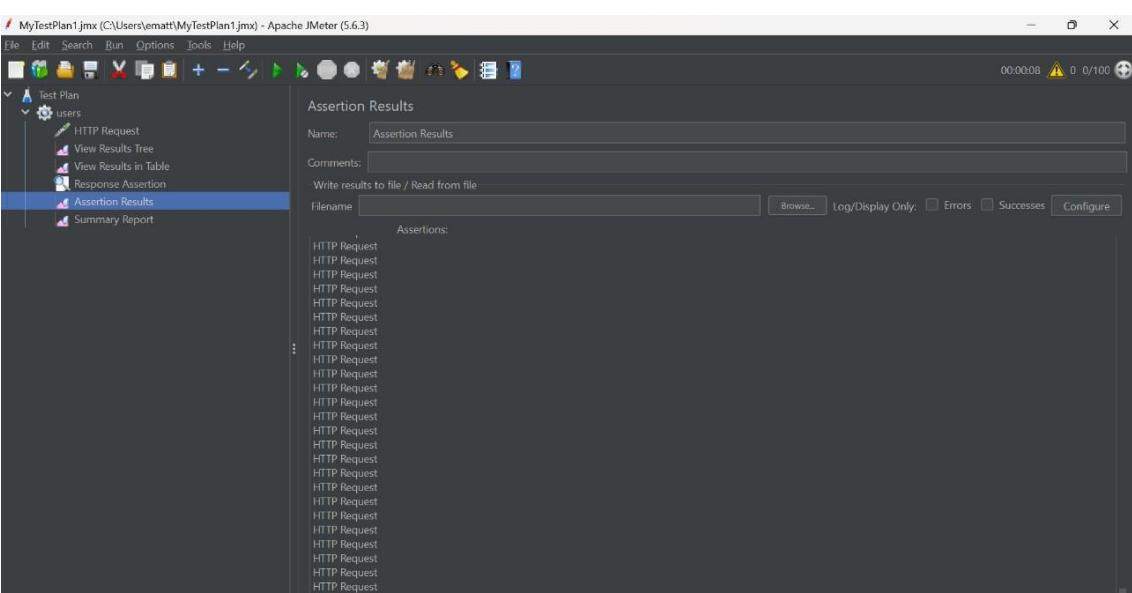
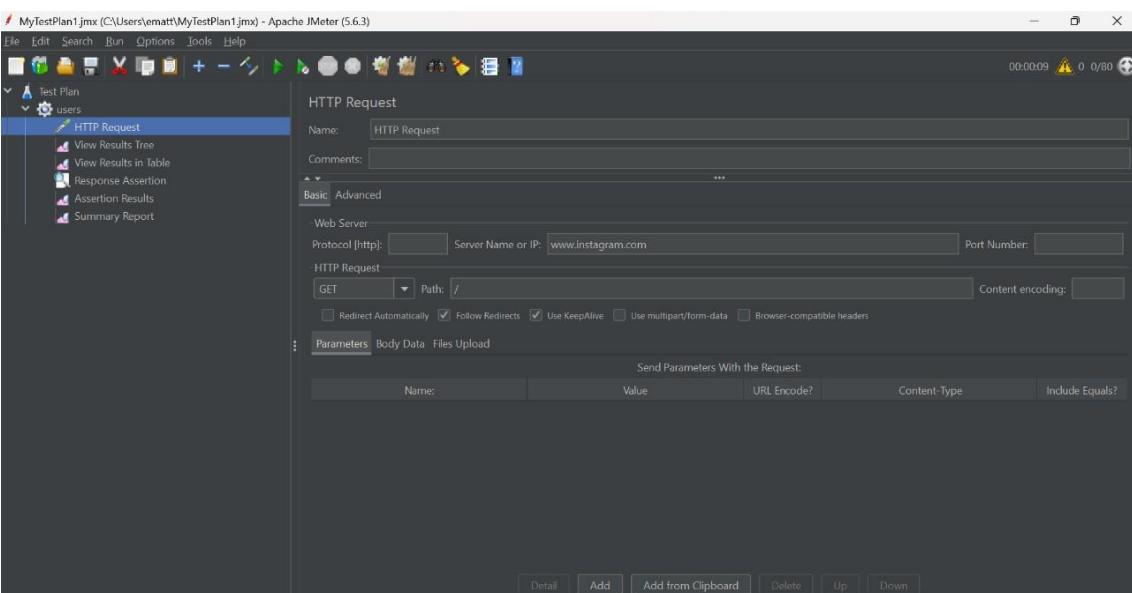
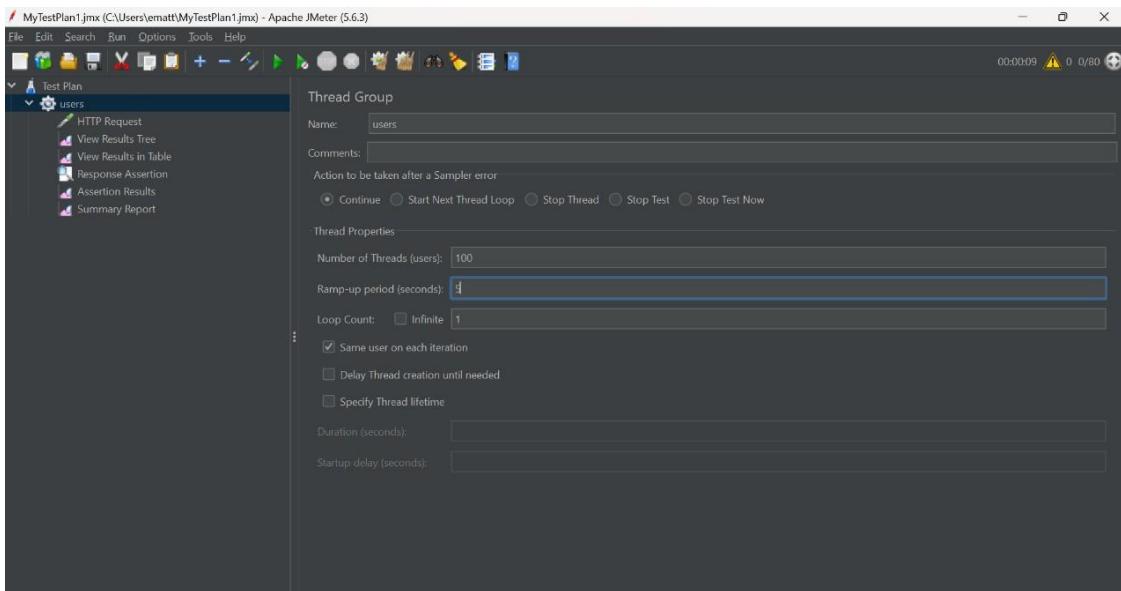
Particulars	Max Marks	Mark Secured
Program and Execution	15	
Viva	10	
Total	25	

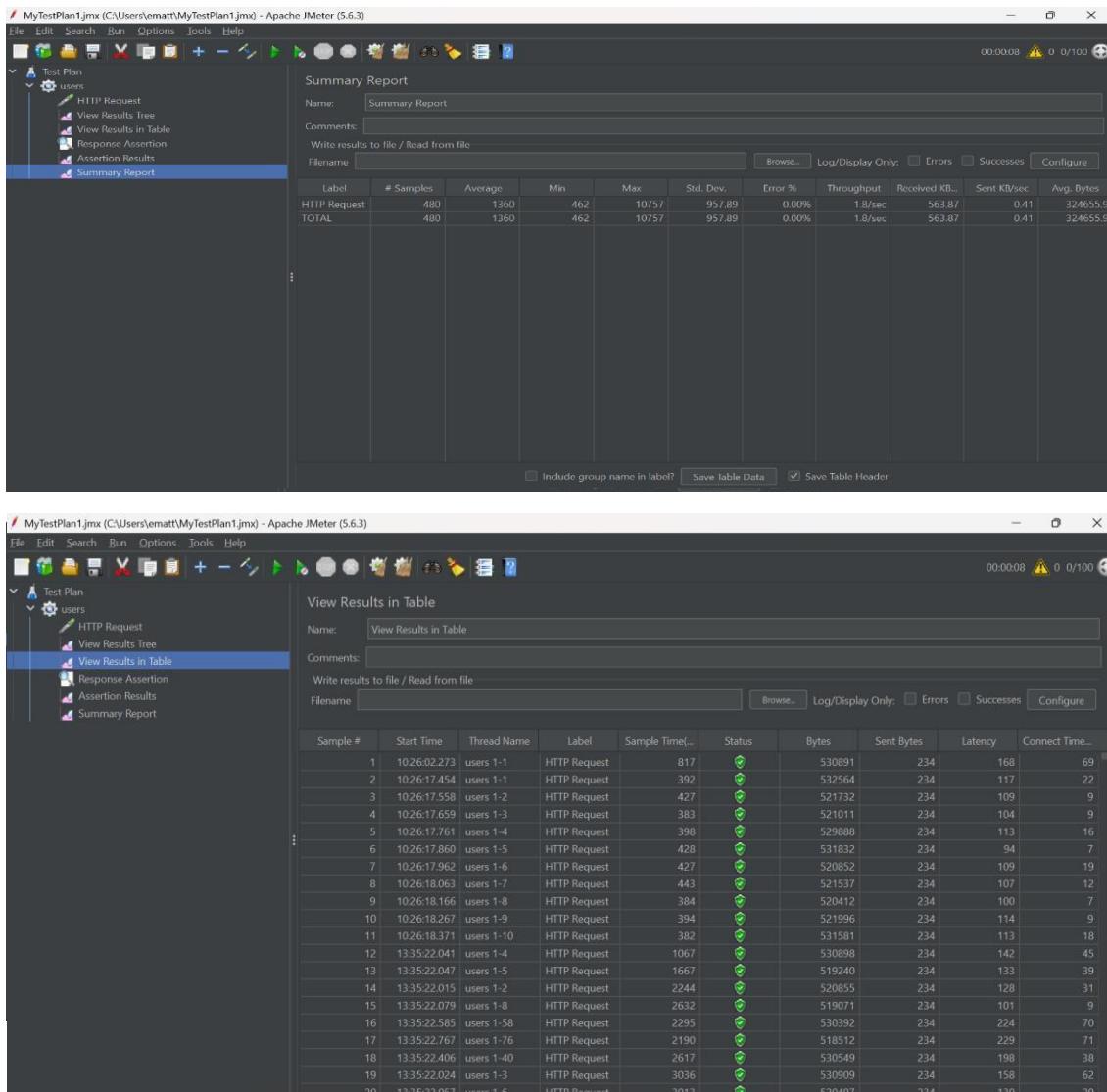
RESULT:

Thus, the above JMeter tool has been executed successfully and the output was verified.

Ex: No:9b	Use JMeter to perform Stress Testing using Instagram website	
<p>AIM: To Use JMeter to perform Stress Testing using Facebook website</p> <p>ALGORITHM:</p> <p>Step 1: Open JMeter in GUI mode.</p> <p>Step 2: First you must create a test plan in the user interface of JMeter.</p> <p>Step 3: Insert a Thread Group and add an HTTP request with the server's name of your website on which you want to perform stress testing.</p> <p>Step 4: Next, you need to add a listener inside the thread group and view the test results. It will show the status of the test that has taken place.</p> <p>Step 5: Now you need to add a response assertion inside your thread group.</p> <p>Step 6: Run and get the test result.</p>		

OUTPUT:





Particulars	Max Marks	Mark Secured
Program and Execution	15	
Viva	10	
Total	25	

RESULT:

Thus, the above Jmeter tool has been executed successfully and the output was verified

Ex: No:10b	Introduction to Timers in JMeter and Generate a Load using Timers with Instagram website	
<p>AIM:</p> <p>To Introduction to Timers in JMeter and Generate a Load using Timers with Facebook website</p> <p>ALGORITHM:</p> <p>Step 1: Open jmeter in GUI mode.</p> <p>Step 2: First you must create a test plan in the user interface of JMeter.</p> <p>Step 3: Next step is to add thread groups and specify the number of threads or users and loop count.</p> <p>Step 4: Once the thread group is created, next step is to add the HTTP Request and specify the server's name and path. Now save your Test Plan in any folder.</p> <p>Step 5: Add Constant Timer.</p> <p>Step 6: Specify the constant time.</p> <p>Step 7: Add Table result.</p> <p>Step 8: Run and get the test result.</p>		

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Particulars	Max Marks	Mark Secured
Program and Execution	15	
Viva	10	
Total	25	

RESULT:

Thus, the above Jmeter tool has been executed successfully and the output was verified.

OUTPUT:

The figure consists of three vertically stacked screenshots of the Apache JMeter 5.6.3 interface, illustrating the setup and execution of a test plan named "MyTestPlan1.jmx".

Screenshot 1: HTTP Request Configuration

This screenshot shows the "HTTP Request" configuration under the "Test Plan" tree. The "HTTP Request" node is selected. The "Basic" tab is active, showing settings for the Web Server (Protocol: http, Server Name or IP: www.instagram.com, Port Number: 80), the HTTP Request (Method: GET, Path: /), and Parameters (Send Parameters With the Request). The "Advanced" tab is also visible.

Screenshot 2: Thread Group Configuration

This screenshot shows the "Thread Group" configuration under the "Test Plan" tree. The "users" thread group is selected. It has one thread defined with 1 user, a ramp-up period of 1 second, and 5 loops. The "Same user on each iteration" option is checked. The "Thread Properties" section includes fields for Duration (seconds) and Startup delay (seconds).

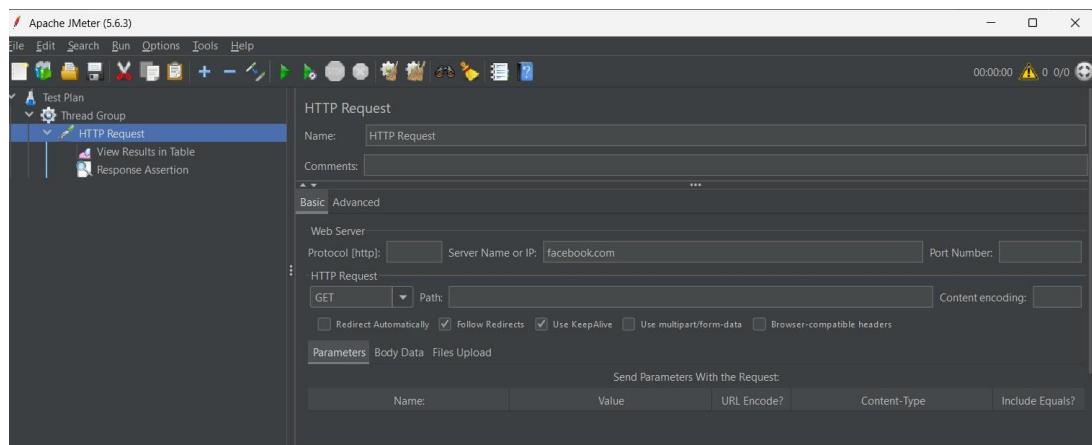
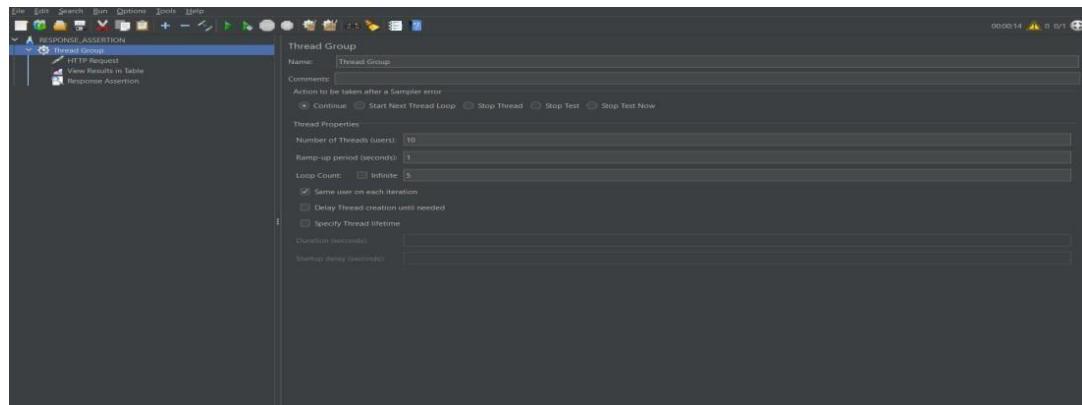
Screenshot 3: View Results in Table Listener

This screenshot shows the "View Results in Table" listener configuration under the "Test Plan" tree. The "View Results in Table" node is selected. The "Table" tab is active, showing a table with five rows of sample data. The columns are Sample #, Start Time, Thread Name, Label, Sample Time(ms), Status, Bytes, Sent Bytes, and Latency. The data is as follows:

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency
1	15:29:37.700	users 1-1	HTTP Request	465	OK	321929	238	24
2	15:29:38.467	users 1-1	HTTP Request	422	OK	321826	238	9
3	15:29:39.192	users 1-1	HTTP Request	500	OK	321824	238	67
4	15:29:39.998	users 1-1	HTTP Request	428	OK	321546	238	6
5	15:29:40.730	users 1-1	HTTP Request	434	OK	321894	238	6

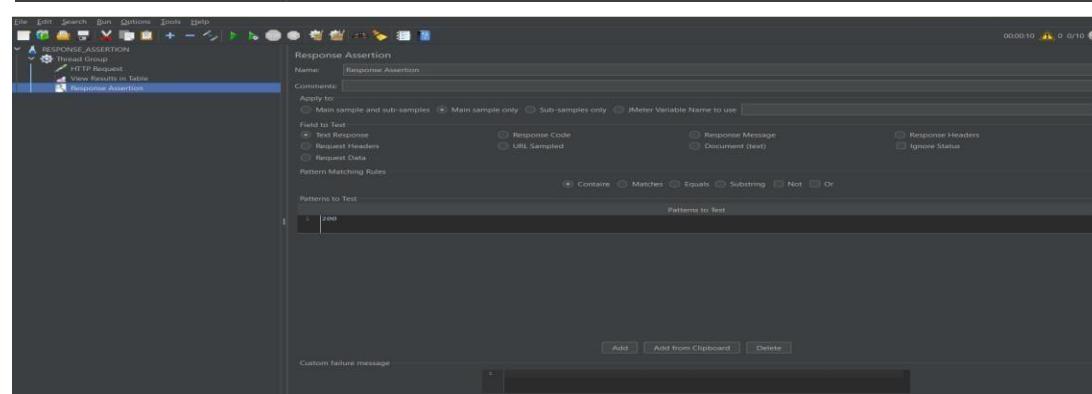
Ex: No:11 B	Introduction to JMeter Response Assertion and Assert Response from Web Page	
AIM:		
To Introduction to JMeter Response Assertion and Assert Response from Web Page		
ALGORITHM:		
<p>Step 1: Open jmeter in GUI mode.</p> <p>Step 2: First you must create a test plan in the user interface of JMeter.</p> <p>Step 3: Next step is to add thread groups and specify the number of threads or users and loop count.</p> <p>Step 4: Once the thread group is created, next step is to add the HTTP Request and specify the server's name and path. Now save your Test Plan in any folder.</p> <p>Step 5: Next, you need to add a listener inside the thread group and view the test results. It will show the status of the test that has taken place.</p> <p>Step 6: Now you need to add a response assertion inside your thread group.</p> <p>Step 7: Add Tree result.</p> <p>Step 8: Run and get the test result.</p>		

OUTPUT:



View Results in Table

Name:	Start Time:	Thread Name:	Label:	Sample Time(ms):	Status:	Bytes:	Sent Bytes:	Latency:	Connect Time(ms):
1	09:17:35.093	Thread Group 1-3	HTTP Request	1978	green	257445	224	508	399
2	09:17:35.499	Thread Group 1-2	HTTP Request	2691	green	257420	224	604	495
3	09:17:35.293	Thread Group 1-5	HTTP Request	2473	green	257450	224	308	199
4	09:17:35.196	Thread Group 1-4	HTTP Request	2604	green	257431	224	405	296
5	09:17:35.894	Thread Group 1-1	HTTP Request	2927	green	257424	224	708	599
6	09:17:35.391	Thread Group 1-3	HTTP Request	2815	green	257422	224	208	99
7	09:17:35.204	Thread Group 1-7	HTTP Request	3330	green	257432	224	328	1097
8	09:17:35.697	Thread Group 1-2	HTTP Request	2680	green	257437	224	367	82
9	09:17:35.594	Thread Group 1-8	HTTP Request	2850	green	257428	224	463	110
10	09:17:37.073	Thread Group 1-3	HTTP Request	1400	green	257423	224	619	0
11	09:17:35.794	Thread Group 1-10	HTTP Request	2732	green	257419	224	386	265
12	09:17:37.689	Thread Group 1-2	HTTP Request	1609	green	257424	224	319	0
13	09:17:37.767	Thread Group 1-5	HTTP Request	1594	green	257426	224	323	0
14	09:17:37.831	Thread Group 1-3	HTTP Request	1589	green	257430	224	338	0
15	09:17:38.821	Thread Group 1-1	HTTP Request	1615	green	257441	224	330	0
16	09:17:38.847	Thread Group 1-3	HTTP Request	1549	green	257433	224	317	0
17	09:17:38.125	Thread Group 1-3	HTTP Request	2364	green	257419	224	533	0
18	09:17:38.000	Thread Group 1-6	HTTP Request	2487	green	257431	224	634	0
19	09:17:38.379	Thread Group 1-9	HTTP Request	2135	green	257436	224	354	0
20	09:17:38.445	Thread Group 1-8	HTTP Request	2147	green	257429	224	349	0
21	09:17:38.526	Thread Group 1-10	HTTP Request	2104	green	257432	224	304	0
22	09:17:38.206	Thread Group 1-2	HTTP Request	2098	green	257438	224	509	0
23	09:17:38.327	Thread Group 1-4	HTTP Request	2030	green	257433	224	445	0
24	09:17:38.361	Thread Group 1-5	HTTP Request	2333	green	257432	224	409	0
25	09:17:38.470	Thread Group 1-6	HTTP Request	3363	green	257440	224	471	0



Particulars	Max Marks	Mark Secured
Program and Execution	15	
Viva	10	
Total	25	

RESULT:

Thus, the above Jmeter tool has been executed successfully and the output was verified.

EX.NO	
DATE	

TEST AND PROVIDE TEST REPORTS FOR THE GIVEN API USING POSTMAN

AIM:

To test and provide test reports for the given API using POSTMAN

PROCEDURE:

Testing GET, POST, PUT, DELETE Request

Get Request:

Create a New Request

1. Click + New → **HTTP Request**
2. Choose the request type as **GET**.
3. Enter your API URL. <https://reqres.in/api/users?page=2>
4. Add this header to your API requests: x-api-key: reqres-free-v1
5. Click Send button.
6. Status code is 200. Message is “**OK**”.

OUTPUT:

The screenshot shows the Postman application interface. On the left, there's a sidebar with various sections like Collections, Environments, Flows, APIs, Mock servers, Monitors, Specs, Insights, and History. The main area is titled 'Testing / GET_Request' and shows a 'GET' request to 'https://reqres.in/api/users?page=2'. Under the 'Params' tab, there are two entries: 'page' with a value of '2' and 'Key' with a value of 'Key'. The 'Body' tab shows a JSON response with a 'page' of 2, a 'per_page' of 6, a 'total' of 12, and a 'total_pages' of 2. The 'data' array contains one element, which is a user object with an 'id' of 7, a 'name' of 'sand dollar', a 'year' of 2006, a 'color' of '#0ECD8E', and a 'pantone_value' of '43-1106'. The status bar at the bottom indicates '200 OK' with a response time of 335 ms and a size of 2.32 KB.

Post Request:

1. Click + New → HTTP Request
2. Choose the request type as POST.
3. Enter your API URL. <https://reqres.in/api/users/>
4. Add this header to your API requests: x-api-key: reqres-free-v1
5. In the body part select raw option and JSON and add the following code.

{

"name": "SMVEC",

"job": "Developer"

}

6. Click Send button.

7. Status code is 201. Message is “Created”

OUTPUT:

The screenshot shows the Postman application interface. On the left, the sidebar lists collections, environments, flows, APIs, and other workspace items. In the main area, a POST request to <https://reqres.in/api/users/1> is selected. The request details show the method as POST and the URL. The body tab contains the following JSON payload:

```
1 {  
2   "name": "SMVEC",  
3   "job": "Developer",  
4   "id": "919",  
5   "createdAt": "2025-10-05T07:45:39.469Z"  
6 }
```

The response section shows a green status bar indicating "201 Created". Below it, the response body is displayed in JSON format:

```
1 {  
2   "name": "SMVEC",  
3   "job": "Developer",  
4   "id": "919",  
5   "createdAt": "2025-10-05T07:45:39.469Z"  
6 }
```

The bottom right corner of the screen shows the Windows taskbar with various pinned icons and system status information.

Put Request:

1. Click + New → HTTP Request

2. Choose the request type as PUT.

3. Enter your API URL. <https://reqres.in/api/users/2>

4. Add this header to your API requests: x-api-key: reqres-free-v1

5. In the body part select raw option and JSON and add the following code.

{

"name": "SMVEC",

"job": "Leader"}

6. Click Send button.

7. Status code is 200. Message is “OK”

OUTPUT:

The screenshot shows the Postman application interface. On the left, the sidebar lists collections, environments, flows, APIs, mock servers, monitors, spaces, insights, and history. Under the 'Testing' collection, there are several requests: 'GET Request1', 'GET Request2', 'DEL Request3', 'PUT PUT_Request' (which is selected), 'GET GET_Request', 'POST POST_Request', and 'DEL DEL_Request'. The main workspace displays a 'PUT' request to the URL 'https://eqlres.in/api/users/2'. The 'Body' tab shows a JSON response with the following content:

```
1 {  
2   "name": "SRVECT",  
3   "job": "Leader",  
4   "updatedAt": "2025-10-05T07:51:38.148Z"  
5 }
```

The status bar at the bottom indicates a '200 OK' response with a duration of '583 ms' and a size of '1.72 KB'. The Windows taskbar at the bottom shows various pinned icons including File Explorer, Edge, Mail, Photos, OneDrive, Task View, Start, and a search bar.

Delete Request:

1. Click + New → HTTP Request
2. Choose the request type as Delete.
3. Enter your API URL. <https://reqres.in/api/users/12>
4. Add this header to your API requests: x-api-key: reqres-free-v1
5. Click Send button.
6. Status code is 200. Message is “OK”.

OUTPUT:

The screenshot shows the Postman application interface. On the left, the sidebar displays 'DEEBA S's Workspace' with various collections and environments. In the main workspace, a 'DELETE' request is being configured for the URL 'https://reqres.in/api/users/12'. The 'Params' tab is selected, showing a single parameter 'Key' with the value 'Value'. The 'Headers' tab lists '(7)' headers. The 'Body' tab is empty. The 'Test Results' section shows a single entry with a status of '204 No Content'. The bottom status bar indicates '820 ms' and '1.54 KB'.

PARTICULARS	MAX MARKS	MARKS SECURED
PROGRAM AND EXECUTION	15	
VIVA	10	
TOTAL MARKS	25	

RESULT:

Thus, to test and provide test reports for the given API using POSTMAN was executed successfully.

EX.NO	
DATE	

TEST AND PROVIDE TEST REPORTS FOR THE UNIT TEST USING POSTMAN

AIM:

Test and provide test reports for the unit test using POSTMAN.

PROCEDURE:

Unit Testing:

1. Click + New → **HTTP Request**
2. Choose the request type as **POST**.
3. Enter your API URL. <https://reqres.in/api/register>
4. Add this header to your API requests: **x-api-key: reqres-free-v1**
5. In the body part select raw option and **JSON** and add the following code.

{

 "email": "eve.holt@reqres.in",

 "password": "pistol"

}

6. Click Scripts->Post response add the following code

```
pm.test("Status code is 200", function () {  
  
    pm.response.to.have.status(200);  
  
});  
  
  
pm.test("Status Message is OK", function () {  
  
    pm.response.to.have.status("OK");  
  
});  
  
  
pm.test("Response contains id", function () {  
  
    var jsonData = pm.response.json();  
  
    pm.expect(jsonData).to.have.property("id");  
  
});  
  
  
pm.test("Response contains token", function () {  
  
    var jsonData = pm.response.json();  
  
    pm.expect(jsonData).to.have.property("token");  
  
});
```

7. Click Send button.

8. Status code is 200. Message is “OK”

9. You can view the test results.

OUTPUT:

The screenshot shows the Postman application interface. On the left, the sidebar displays 'DEEBA S's Workspace' with collections like 'API Testing', 'Unit, Integration testing', and 'Unit_Test1'. The main workspace shows a POST request to 'https://reqres.in/api/register'. The 'Scripts' tab contains the following Mocha-style test code:

```
pm.test("Status code is 200", function () {
    pm.response.to.have.status(200);
});
pm.test("Status Message is OK", function () {
    pm.response.to.have.status("OK");
});
pm.test("Response contains id", function () {
    var jsonData = pm.response.json();
    pm.expect(jsonData).to.have.property("id");
});
pm.test("Response contains token", function () {
    var jsonData = pm.response.json();
    pm.expect(jsonData).to.have.property("token");
});
```

The 'Test Results' section at the bottom shows four green 'PASSED' status indicators:

- PASSED Status code is 200
- PASSED Status Message is OK
- PASSED Response contains id
- PASSED Response contains token

The status bar at the bottom right indicates '200 OK' with a response time of 671 ms and a size of 1.68 KB. The system tray shows the date as 10/5/2025 and the time as 1:48 PM.

PARTICULARS	MAX MARKS	MARKS SECURED
PROGRAM AND EXECUTION	15	
VIVA	10	
TOTAL MARKS	25	

RESULT:

Thus, to test and provide test reports for the unit test using POSTMAN was executed successfully.

EX.NO	
DATE	

PERFORM UNIT TESTING WITH DIFFERENT ORDER OF EXECUTION

AIM:

To perform Unit testing with different order of execution.

PROCEDURE:

Unit Test:

1. Click + New → **HTTP Request**
2. Choose the request type as GET.
3. Enter your API URL. <https://reqres.in/api/users/2>
4. Add this header to your API requests: x-api-key: reqres-free-v1
5. Click Scripts->Post response add the following code

```
pm.test("Status code is 200", function () {
```

```
    pm.response.to.have.status(200);
```

```
});
```

```
pm.test("Status code is OK", function () {
```

```
pm.response.to.have.status("OK");

});

pm.test("Response time is less than 1000ms", function () {

pm.expect(pm.response.responseTime).to.be.below(1000);

});

pm.test("User ID is 2", function () {

var jsonData = pm.response.json();

pm.expect(jsonData.data.id).to.eql(2);

});


```

6. Click Send button.
7. Status code is 200. Message is “**OK**”.

OUTPUT:

The screenshot shows the Postman application interface. On the left, the sidebar displays 'DEEBA S's Workspace' with collections like 'API Testing' containing 'GET_Request', 'POST_Request', 'PUT_Request', and 'DEL_Request'. Under 'Unit_Testing', there are two items: 'Unit_Test1' and 'Unit_Test2'. The main workspace shows a 'Unit_Test2' collection. A 'GET' request is selected with the URL 'https://reqres.in/api/users/2'. The 'Test Results' section shows four assertions all marked as 'PASSED': 'Status code is 200', 'Status code is OK', 'Response time is less than 1000ms', and 'User ID is 2'. The status bar at the bottom indicates '200 OK' with a response time of 312 ms and a size of 2.14 KB.

PARTICULARS	MAX MARKS	MARKS SECURED
PROGRAM AND EXECUTION	15	
VIVA	10	
TOTAL MARKS	25	

RESULT:

Thus, to perform Unit testing with different order of execution executed successfully.