JMeter

How to Download and Install JMeter?

There is just one prerequisite for downloading and installing JMeter: to have Java installed in your system.

1. Check if Java Is Installed

- Open the command prompt
- Put the command java -version

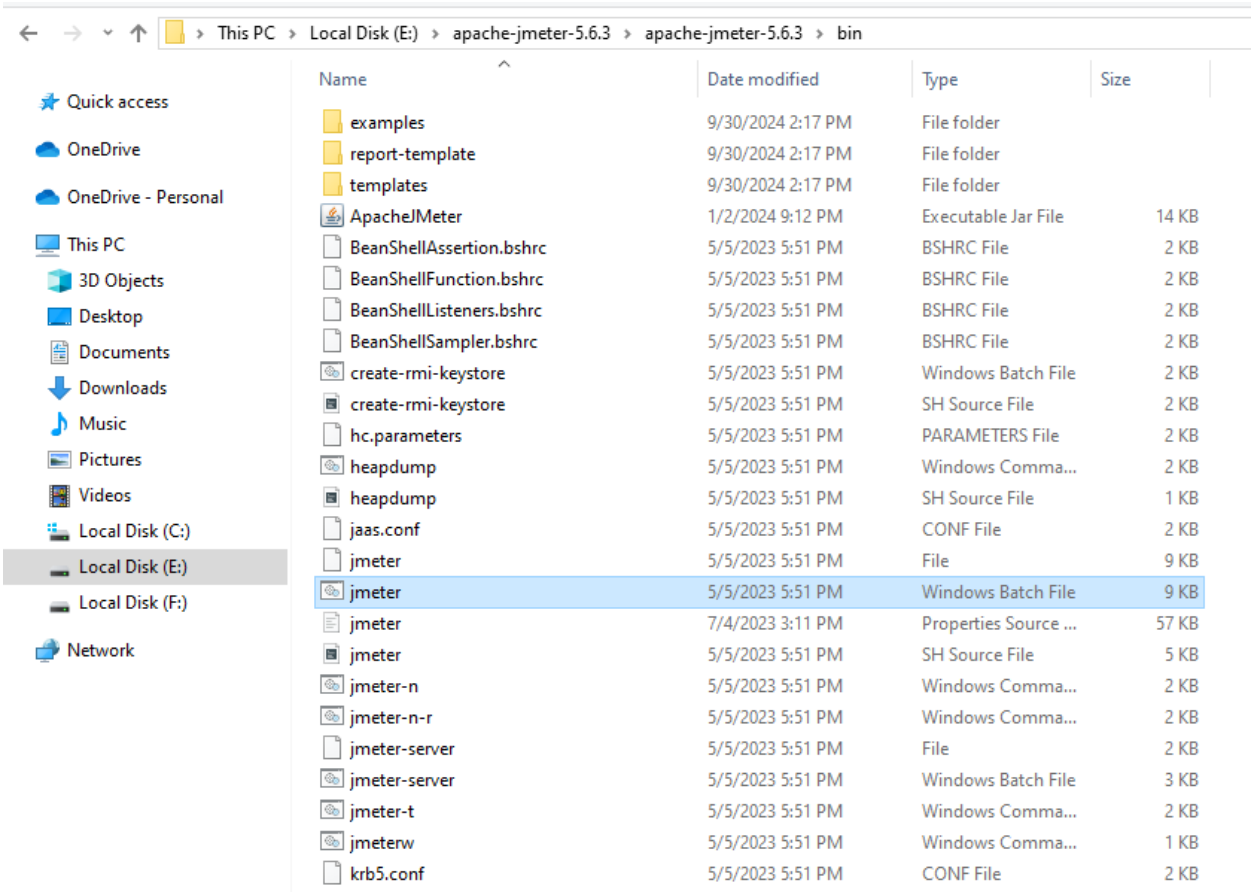
If you have Java installed in your system, the command will show the version of Java installed, else, before going forward with the installation of JMeter, you must install Java.
https://www.oracle.com/in/java/technologies/downloads/

2. Download JMeter

- To download JMeter go to the Apache JMeter website https://jmeter.apache.org/download_jmeter.cgi
- On the website go to the binaries section and download the zip file
- Wait for the zip folder to be downloaded

3. Install JMeter

- Once the zip folder is downloaded, go to the folder location, and then extract the zip folder
- Once the folder is extracted go inside that folder and then go inside the bin folder here
- In the bin folder open the jmeter.bat file



It will take a while to open, and this is how you can download and install JMeter onto your system. Now when you have installed JMeter, you can execute a test for the same.

4. Create the First Test Plan

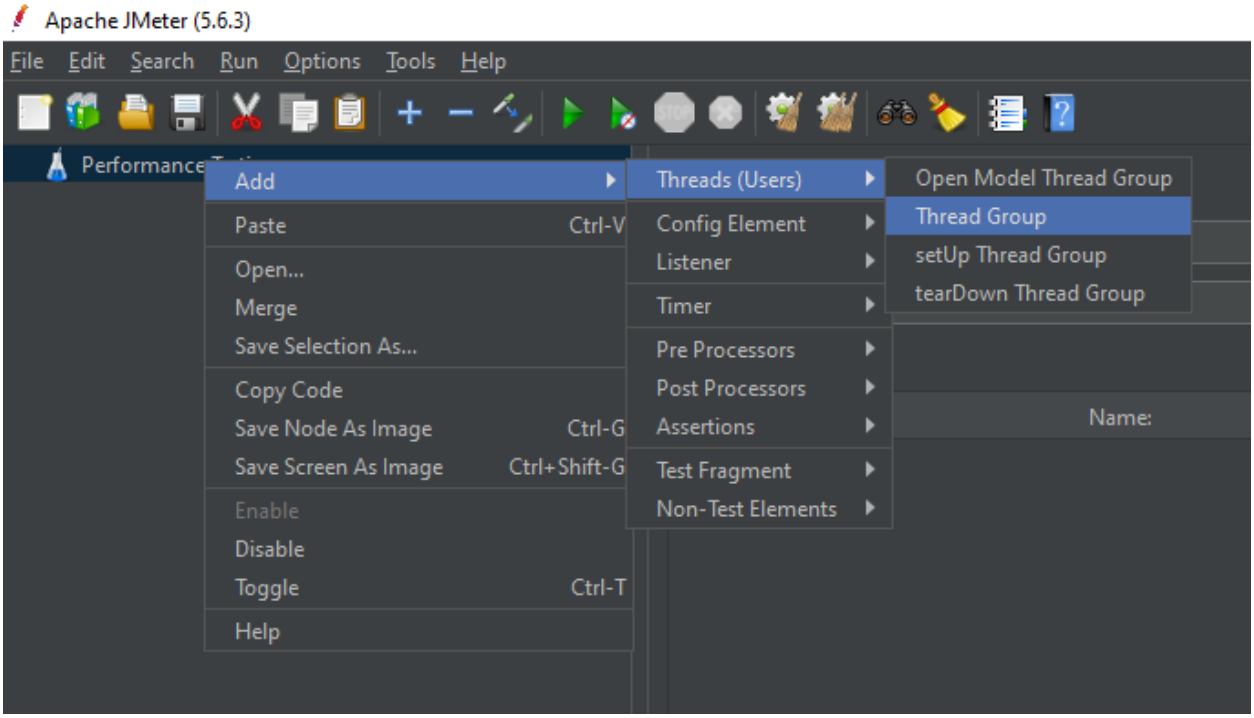
The first step in creating the test plan is

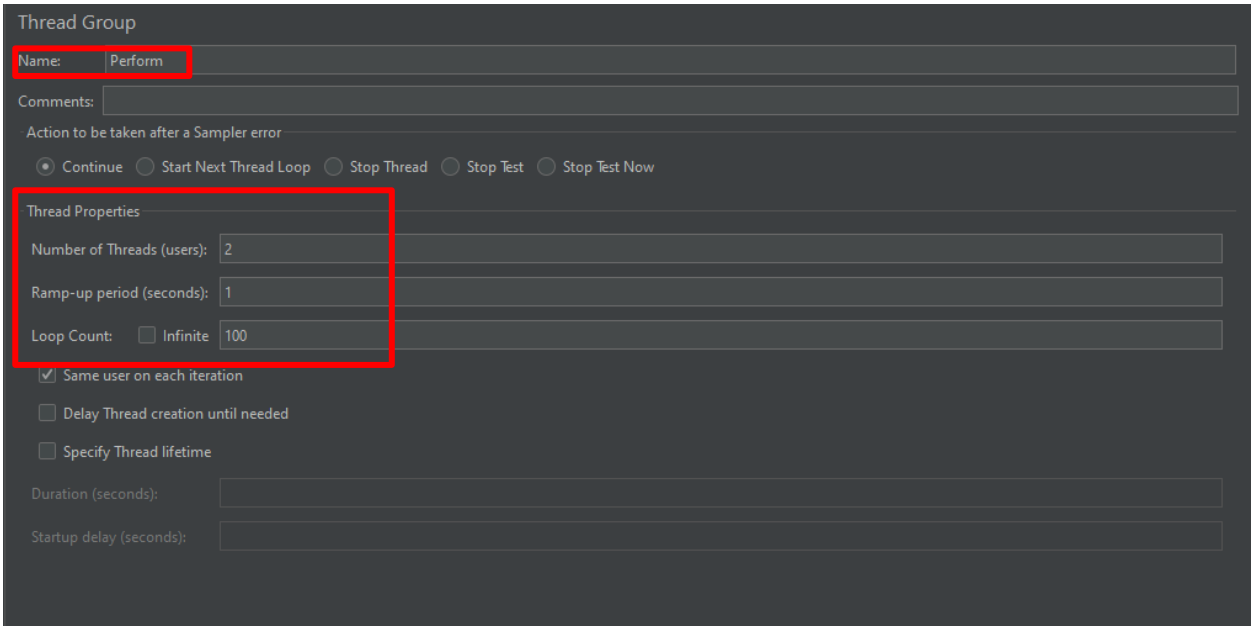
- Open the JMeter window
- Rename the test plan and save it

Performance Testing

Adding a Thread Group

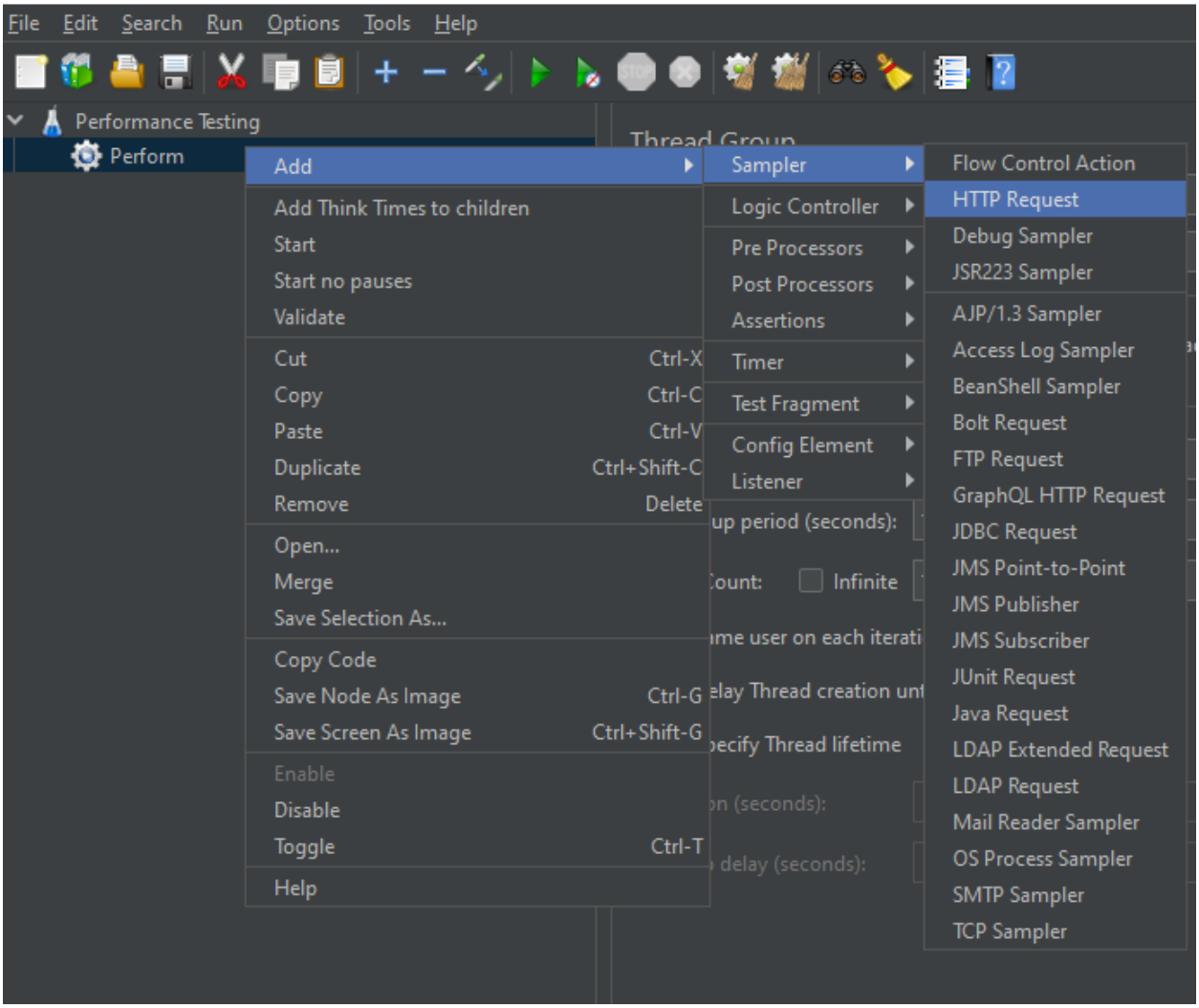
- Right-click on the test plan.
- Go to add -> Threads (Users) -> Thread Group





Add an HTTP Request

- Right-click on FirstJMeter
- Add > Sampler > HTTP Request



Now, rename it to be Homepages.

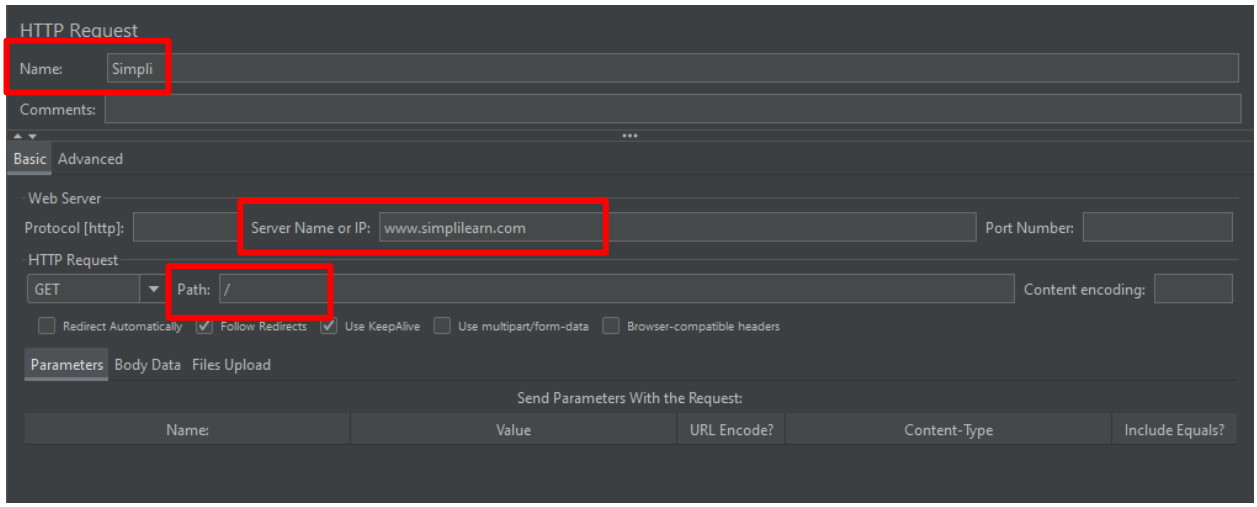
Here, in the Server Name or IP box, you have to give the server's name or the IP.

Let's pick up a website; for now, take Simplilearn's website.

- Copy the URL
- Come back to the JMeter window and paste it into the Server Name box.

Don't give HTTP or HTTPS since these are protocols that will come in the other box. They will be automatically taken in the HTTP request case.

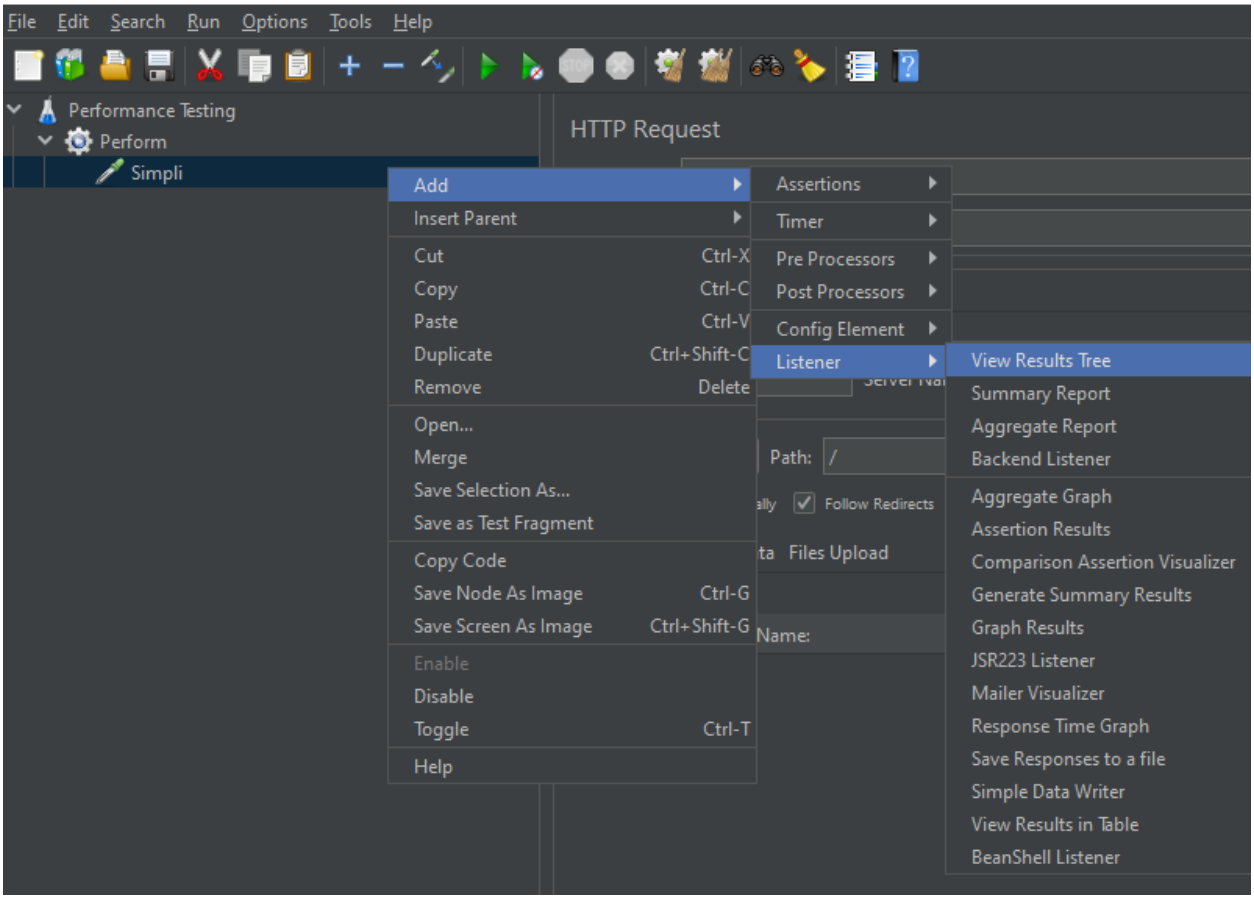
Then in the path dialog box, leave a forward slash there.



Add Listeners

To determine what the results of the test will be, you need to add some more test elements.

- Right-click on FirstJMeter
- Go to listener options
- (View Results Tree/ Graph Results/ View results in table)


File Edit Search Run Options Tools Help
Performance Testing
Perform
Simpli
HTTP Request
Add
Insert Parent
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Copy Ctrl-C
Paste Ctrl-V
Duplicate Ctrl+Shift-C
Remove Delete
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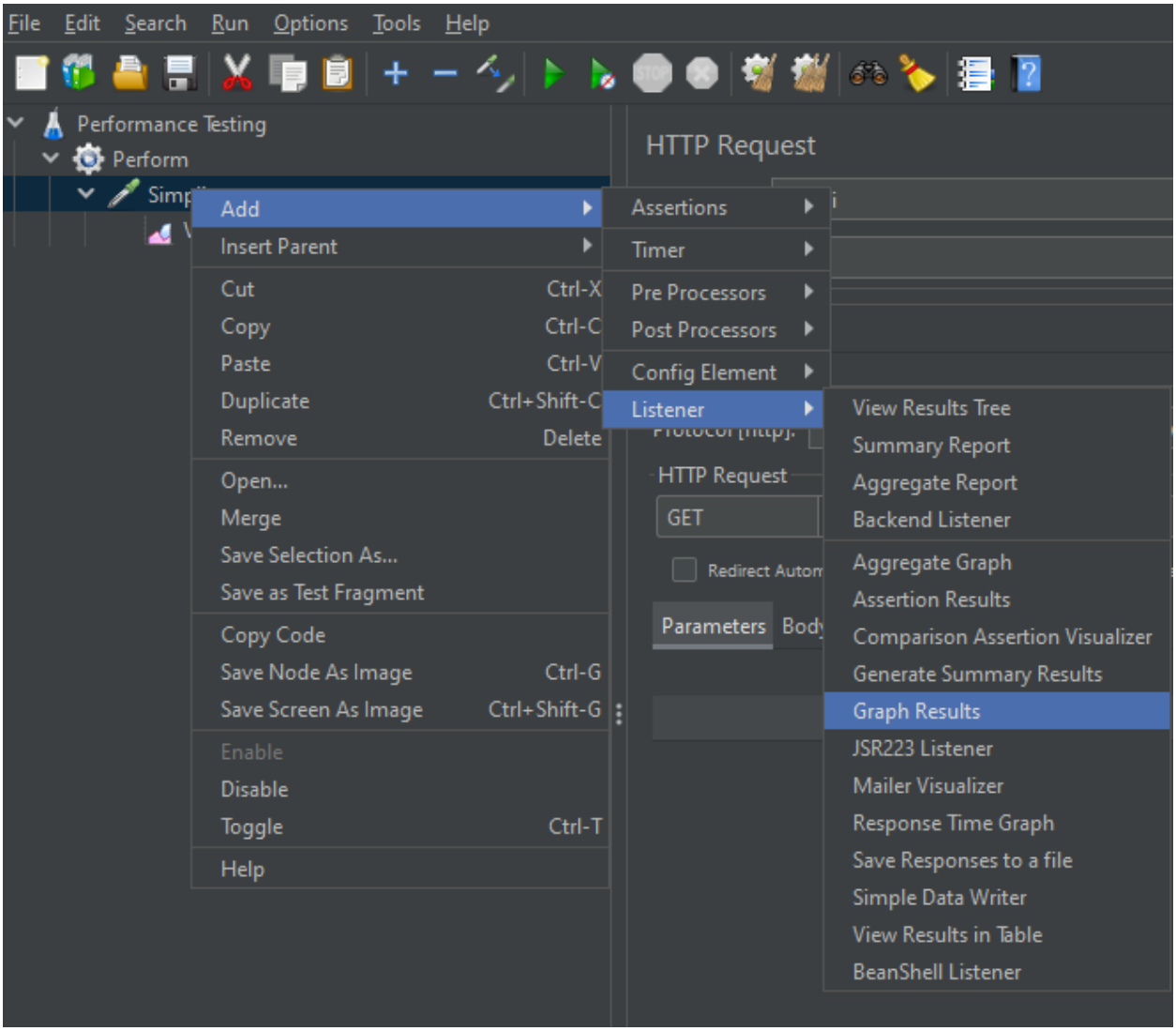
Save Selection As...
Save as Test Fragment
Copy Code
Save Node As Image Ctrl-G
Save Screen As Image Ctrl+Shift-G
Enable
Disable
Toggle Ctrl-T
Help
Assertions
Timer
Pre Processors
Post Processors
Config Element
Listener
Path: /
Follow Redirects
Files Upload
Name:
View Results Tree
Summary Report
Aggregate Report
Backend Listener
Aggregate Graph
Assertion Results
Comparison Assertion Visualizer
Generate Summary Results
Graph Results
JSR223 Listener
Mailer Visualizer
Response Time Graph
Save Responses to a file
Simple Data Writer
View Results in Table
BeanShell Listener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HTTP Request
GET
Parameters
View Results Tree
Summary Report
Aggregate Report
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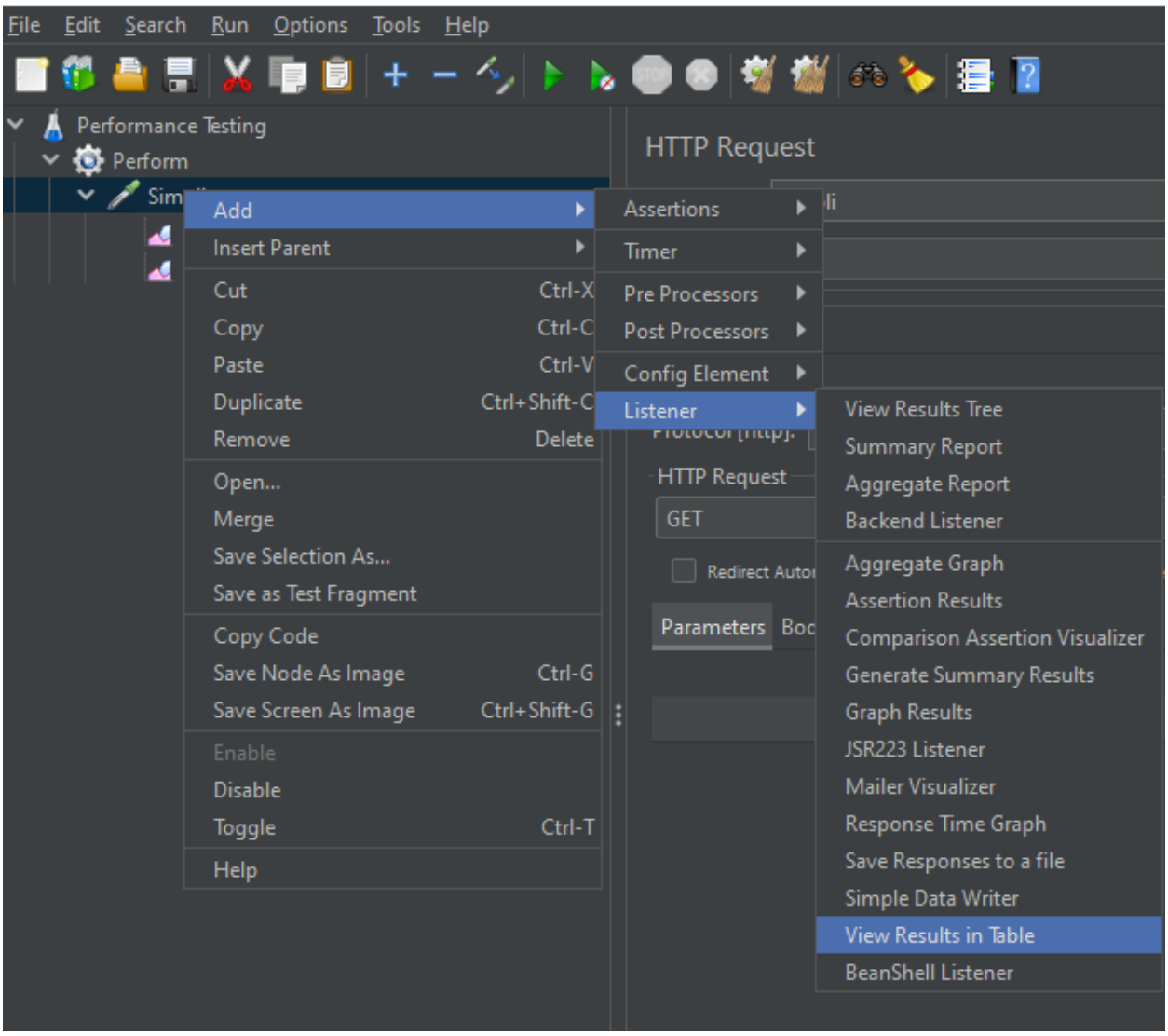


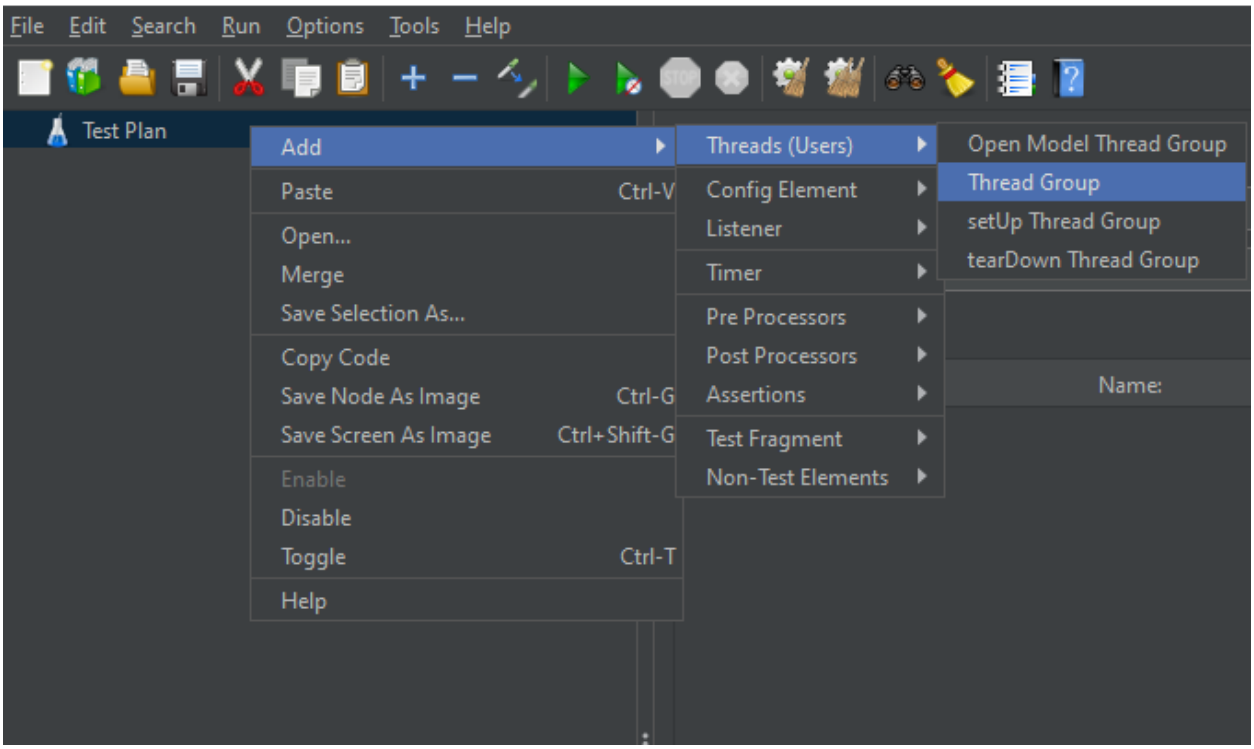
Run the test

- Now, save the test and run it
- For running the test, click the green button

Load Testing

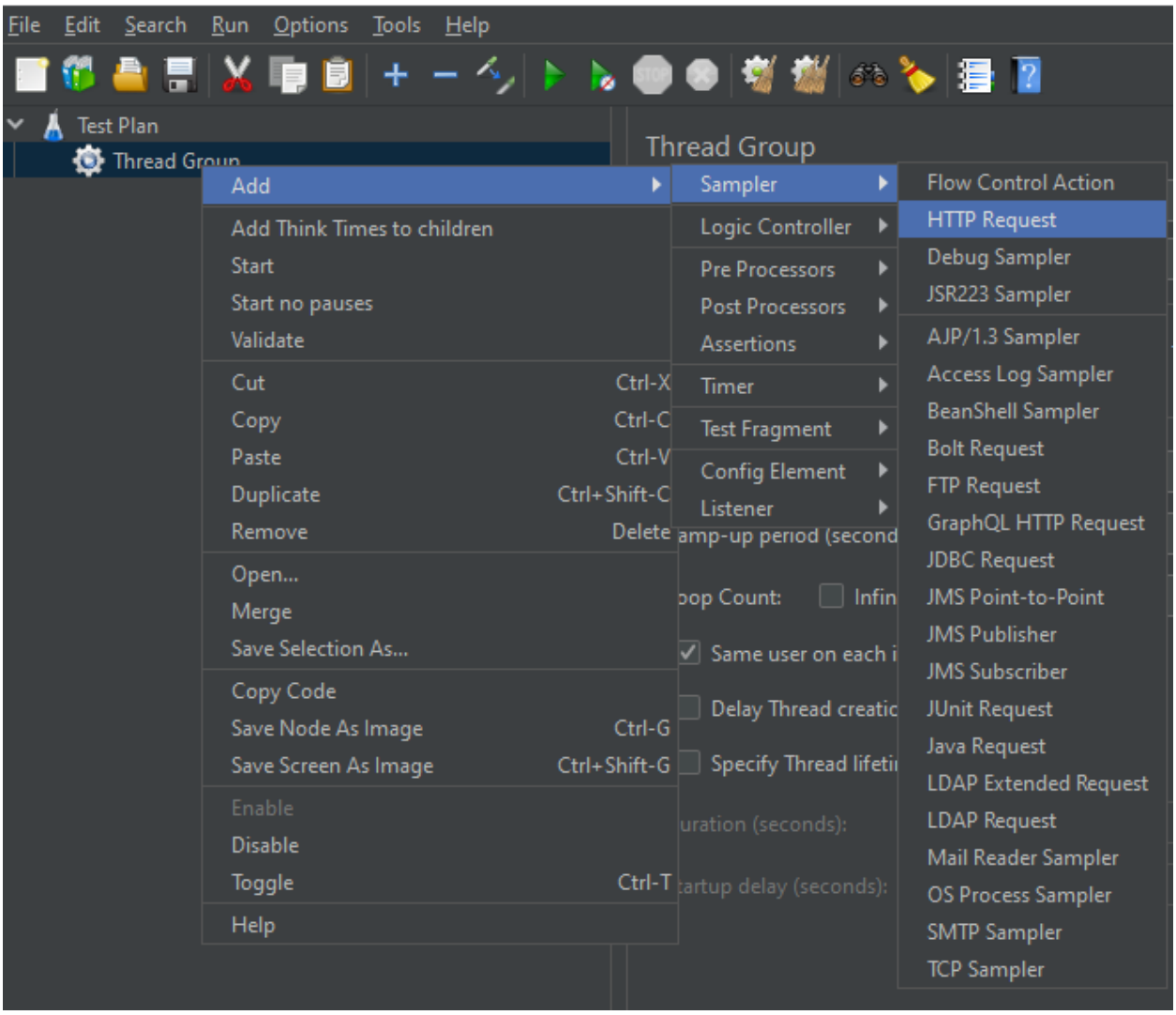
Adding a Thread Group

- Right-click on the test plan.
- Go to add -> Threads (Users) -> Thread Group



Add 3 HTTP Request

- Right-click on FirstJMeter
- Add > Sampler > HTTP Request



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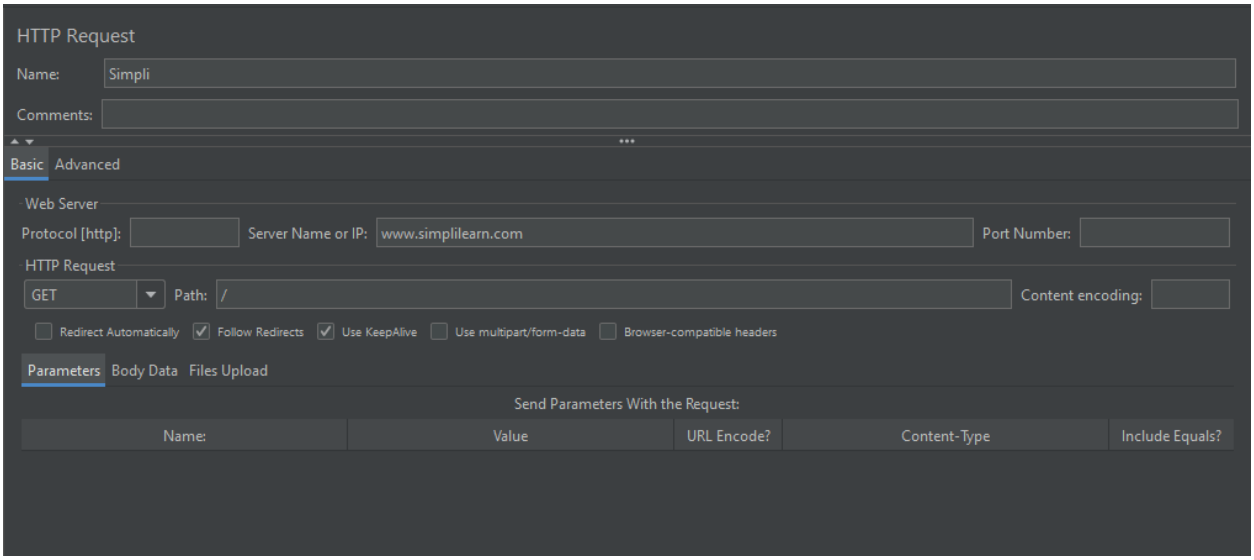
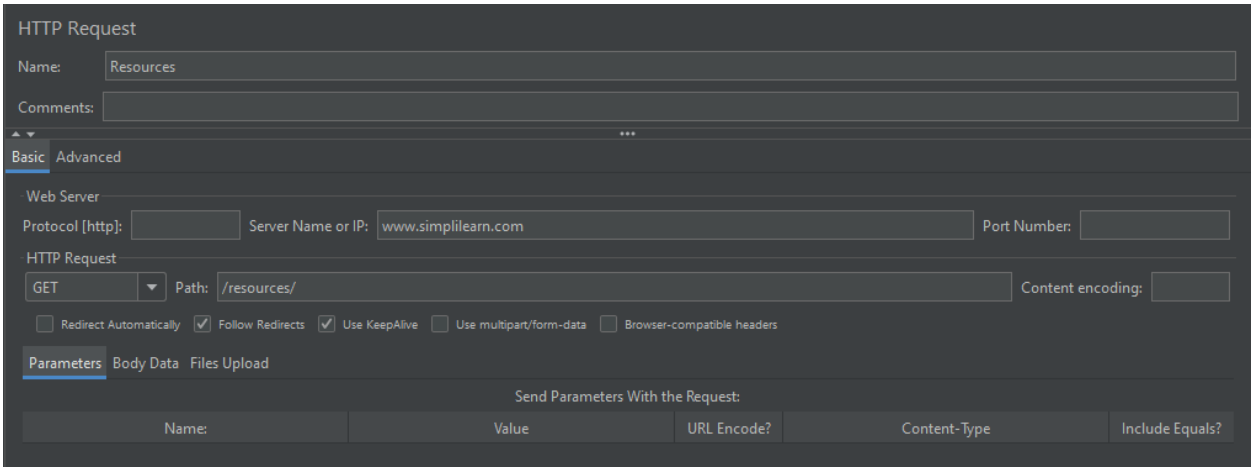
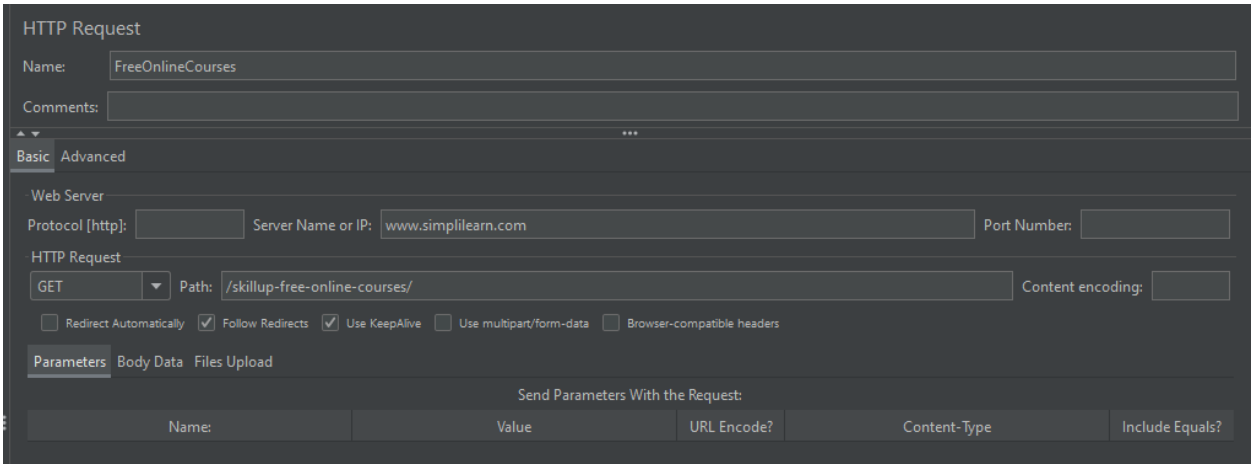




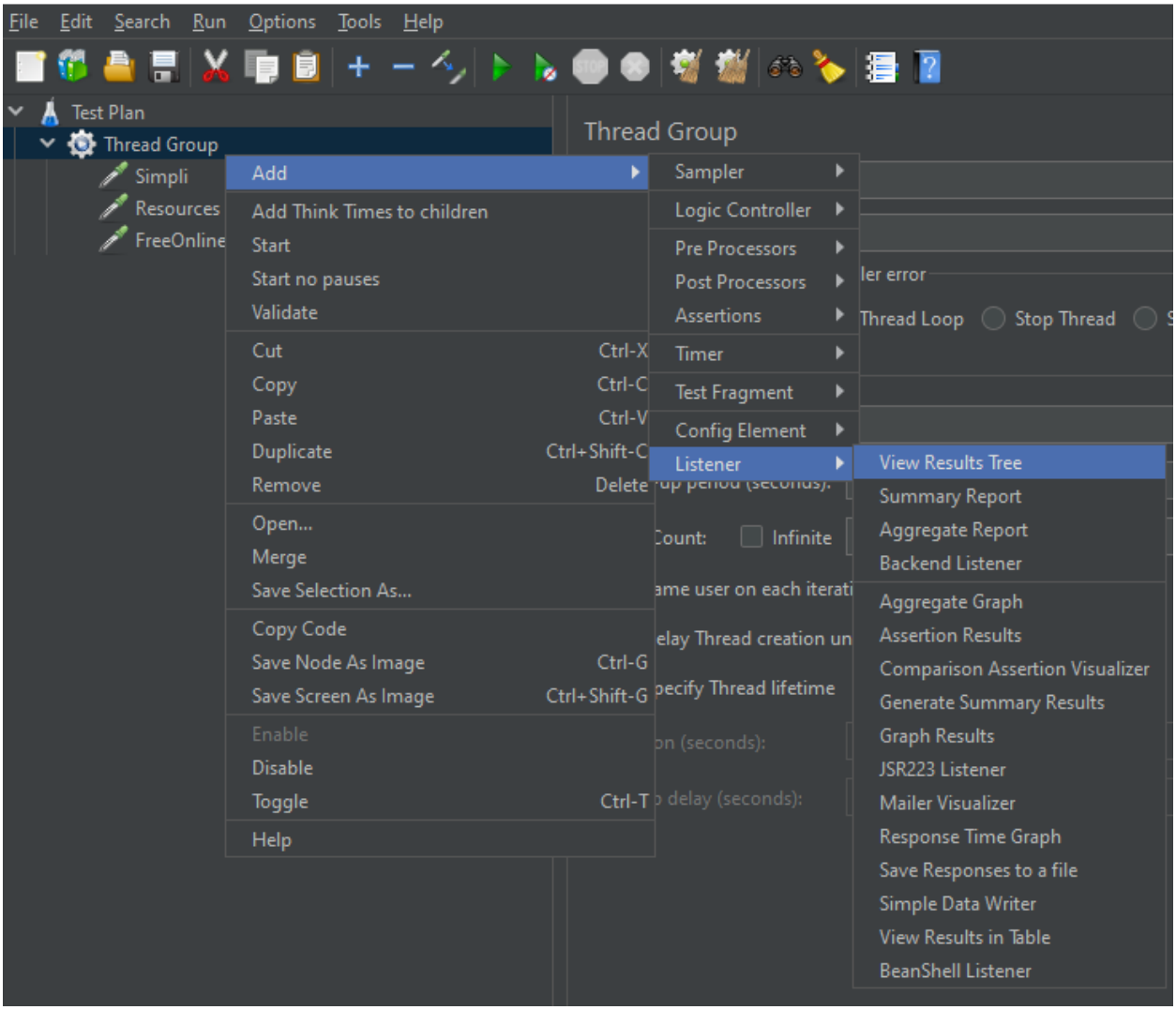


Add Listeners

To determine what the results of the test will be, you need to add some more test elements.

- Right-click on FirstJMeter
- Go to listener options

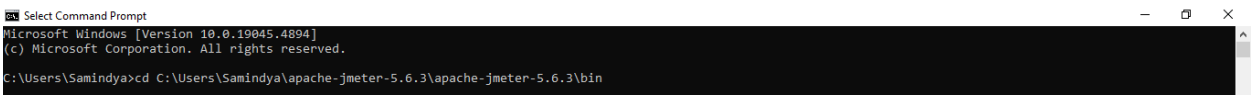
(View Results Tree)



Run the test

- Now, save the test and run it
- For running the test, click the green button
- After running, Remove the “View Results Tree”
- Open the command prompt

Apache bin folder → cd C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin

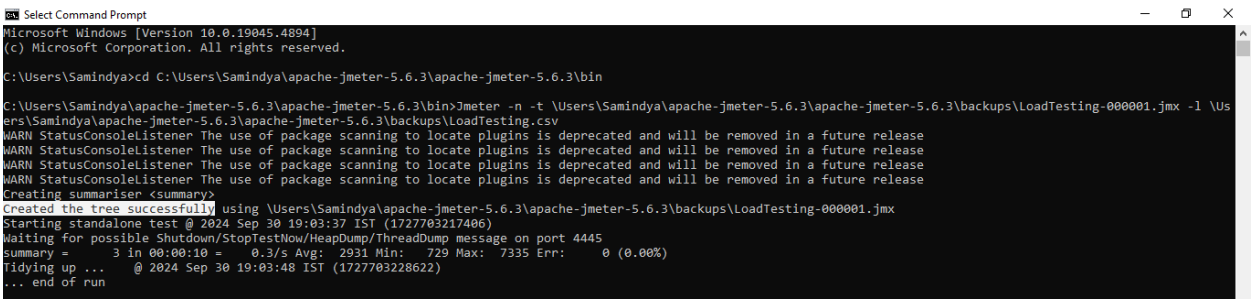


Jmeter -n

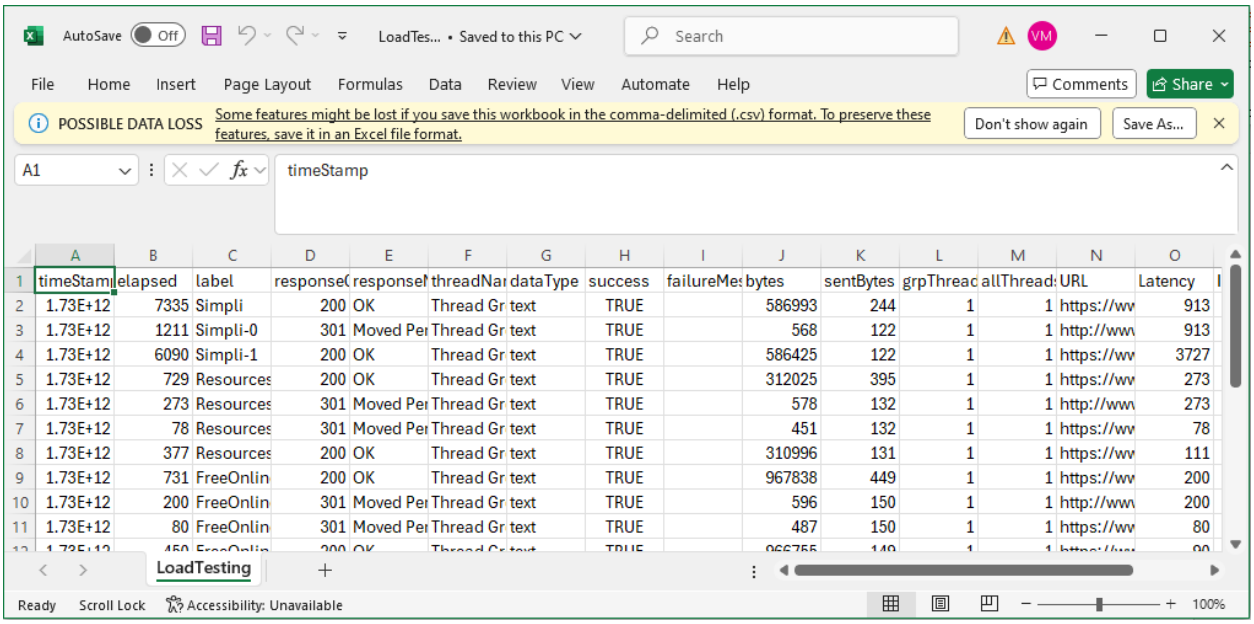
-t → location → C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\backups\LoadTesting-000001.jmx

-l → → C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\backups\LoadTesting.csv

Jmeter -n -t \Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\backups\LoadTesting-000001.jmx -l \Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\backups\LoadTesting.csv



Finally,



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3	1.73E+12	1211	Simpli-0	301	Moved Per	Thread Gr	text	TRUE		568	122	1	1	http://www	913
4	1.73E+12	6090	Simpli-1	200	OK	Thread Gr	text	TRUE		586425	122	1	1	https://ww	3727
5	1.73E+12	729	Resources	200	OK	Thread Gr	text	TRUE		312025	395	1	1	https://ww	273
6	1.73E+12	273	Resources	301	Moved Per	Thread Gr	text	TRUE		578	132	1	1	http://www	273
7	1.73E+12	78	Resources	301	Moved Per	Thread Gr	text	TRUE		451	132	1	1	https://ww	78
8	1.73E+12	377	Resources	200	OK	Thread Gr	text	TRUE		310996	131	1	1	https://ww	111
9	1.73E+12	731	FreeOnlin	200	OK	Thread Gr	text	TRUE		967838	449	1	1	https://ww	200
10	1.73E+12	200	FreeOnlin	301	Moved Per	Thread Gr	text	TRUE		596	150	1	1	http://www	200
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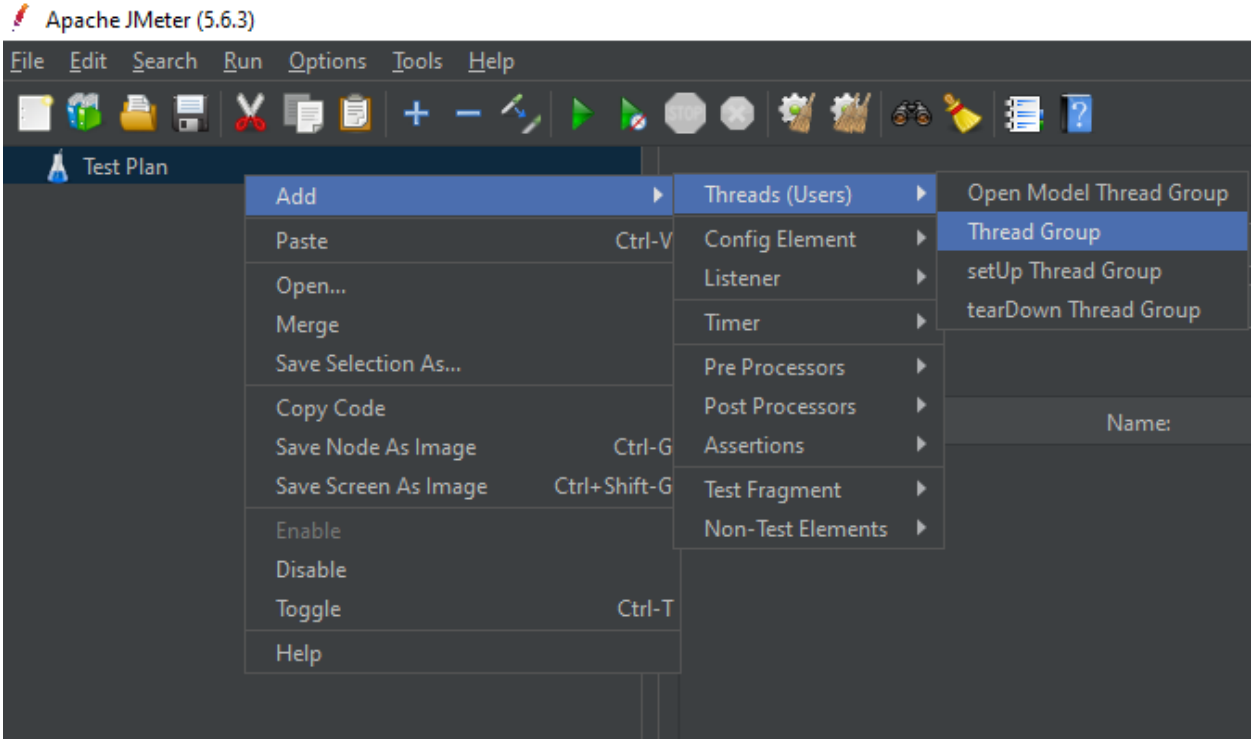
API Testing

API Testing: GET METHOD

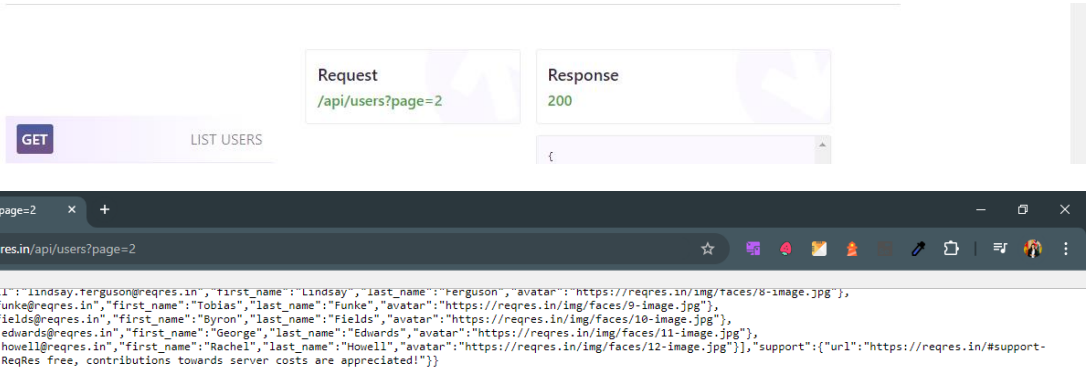
Open Apache Jmeter

Adding a Thread Group

- Right-click on the test plan.
- Go to add -> Threads (Users) -> Thread Group



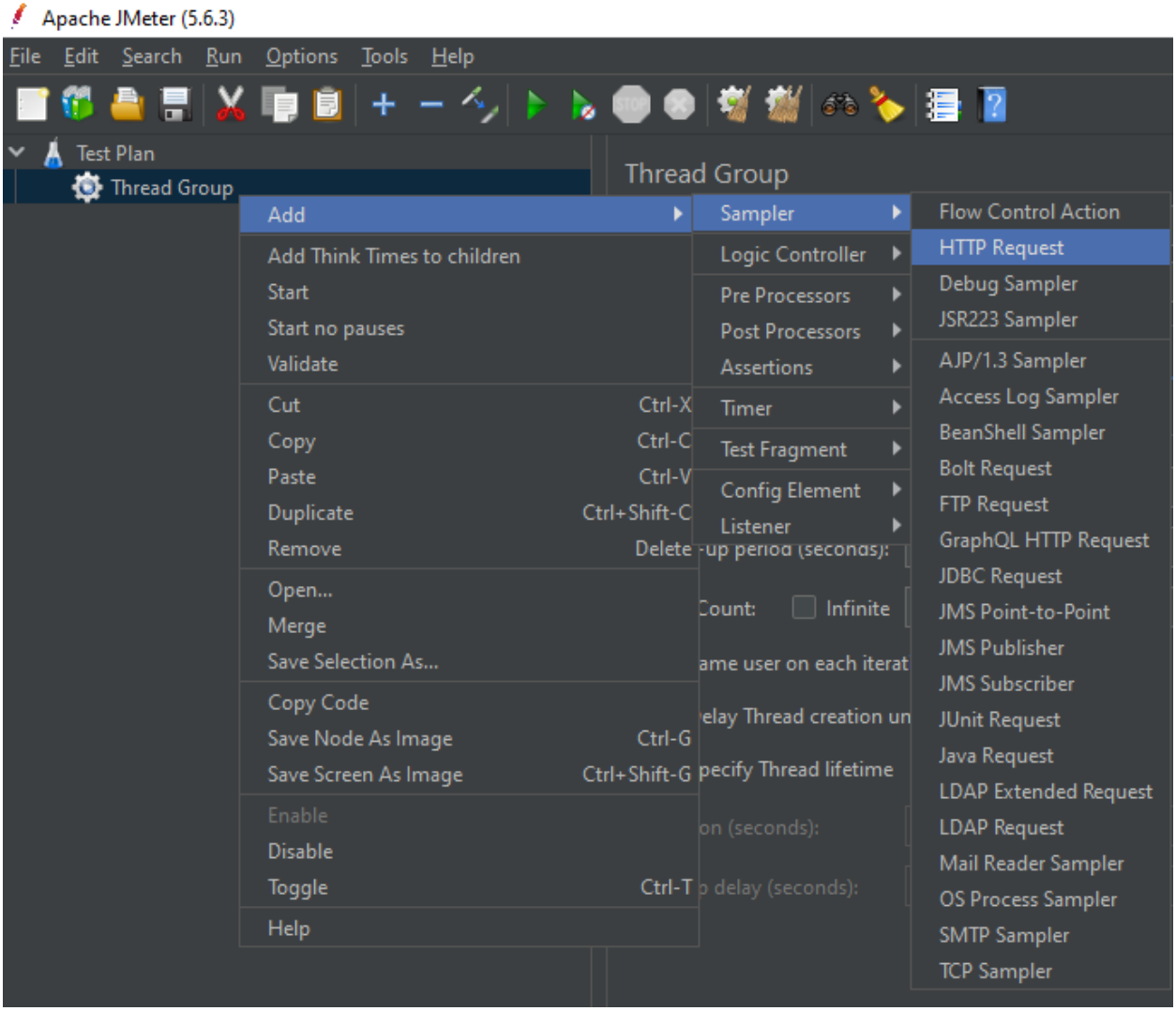
Sample API for testing : https://reqres.in/



Copy the link

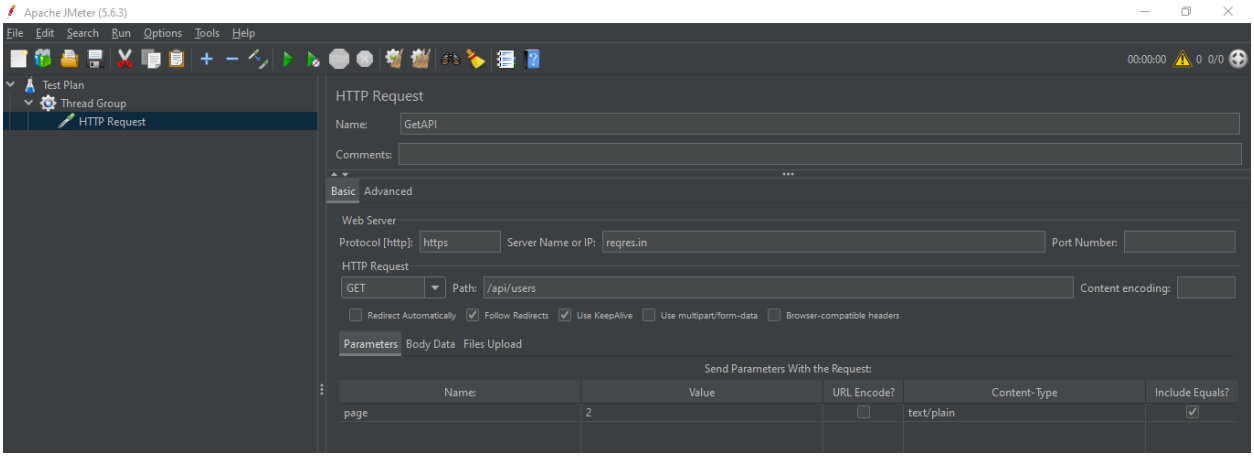
Add an HTTP Request

- Right-click on FirstJMeter
- Add > Sampler > HTTP Request



Paste the link as given below

Protocol/ Server Name or IP/ Path/ Parameters → HTTP Request= GET



Add Listeners

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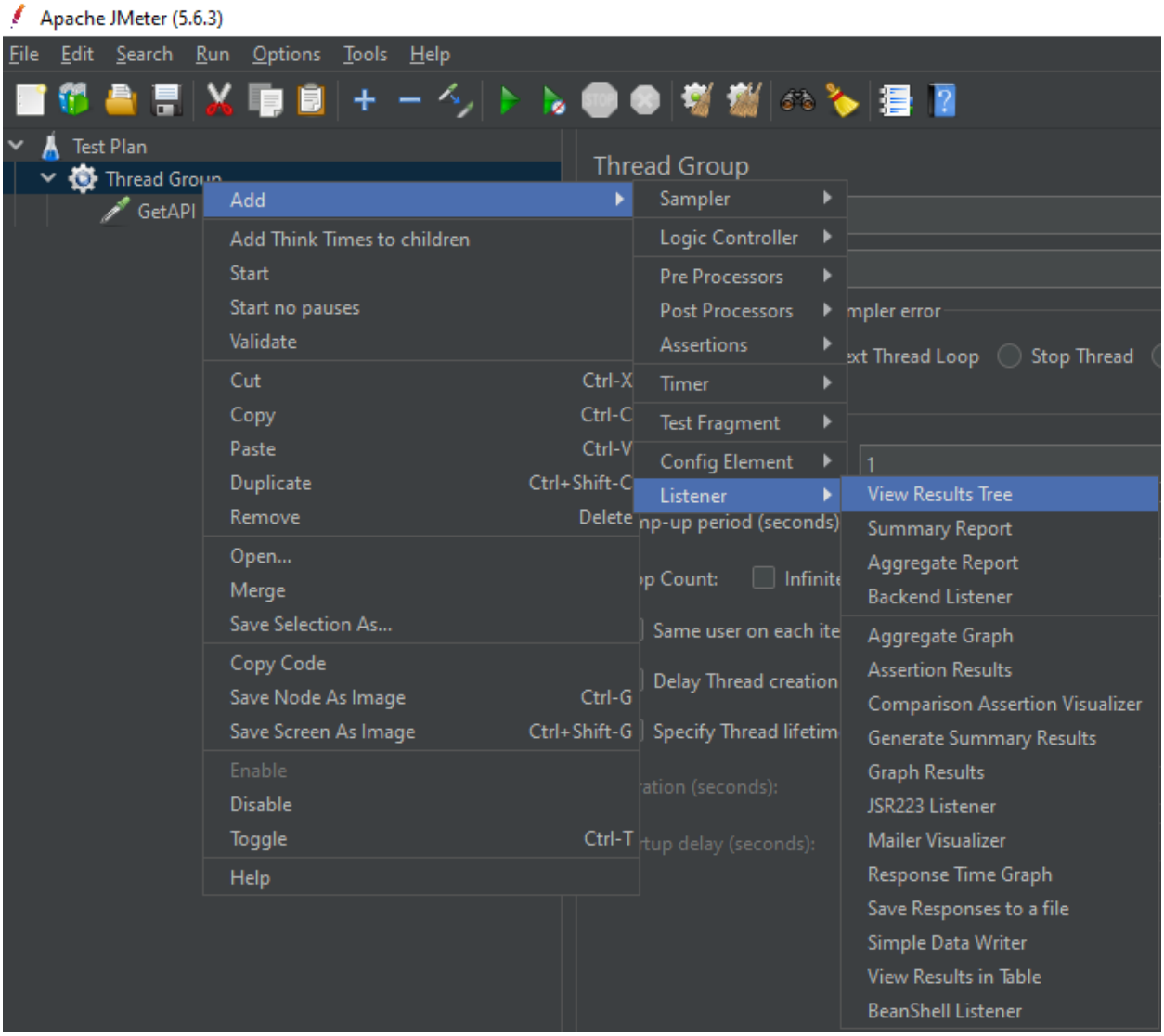
- Right-click on FirstJMeter
- Go to listener options

(View Results Tree/View Results in Table)


Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
Test Plan
Thread Group
GetAPI
Thread Group
Add
Add Think Times to children
Start
Start no pauses
Validate
Cut Ctrl-X
Copy Ctrl-C
Paste Ctrl-V
Duplicate Ctrl+Shift-C
Remove Delete
Open...
Merge
Save Selection As...
Copy Code
Save Node As Image Ctrl-G
Save Screen As Image Ctrl+Shift-G
Enable
Disable
Toggle Ctrl-T
Help
Sampler
Logic Controller
Pre Processors
Post Processors
Assertions
Timer
Test Fragment
Config Element
Listener
mpler error
xt Thread Loop
Stop Thread
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np-up period (seconds)
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Infinite
Same user on each ite
Delay Thread creation
Specify Thread lifetim
ation (seconds):
tup delay (seconds):
View Results Tree
Summary Report
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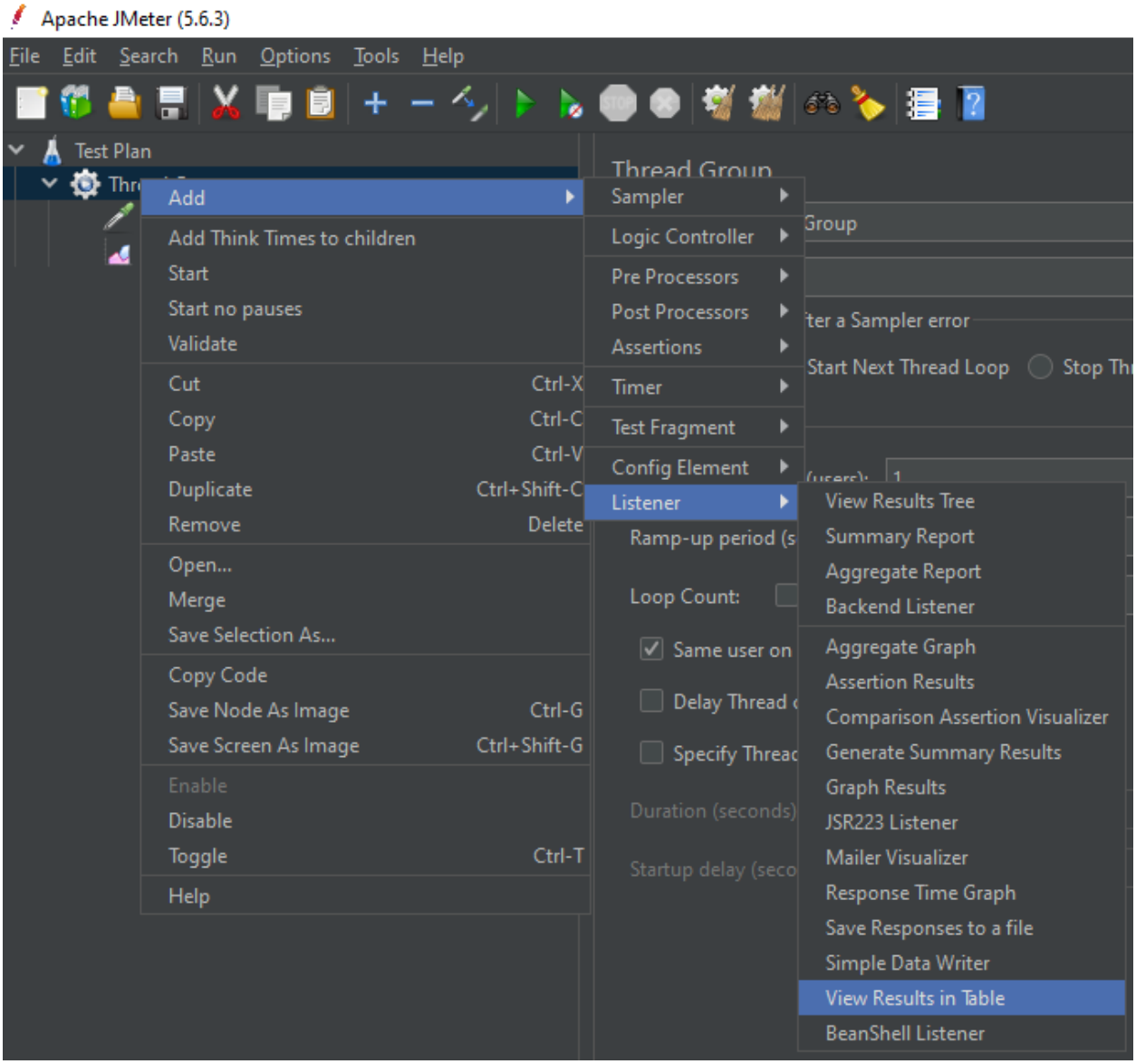
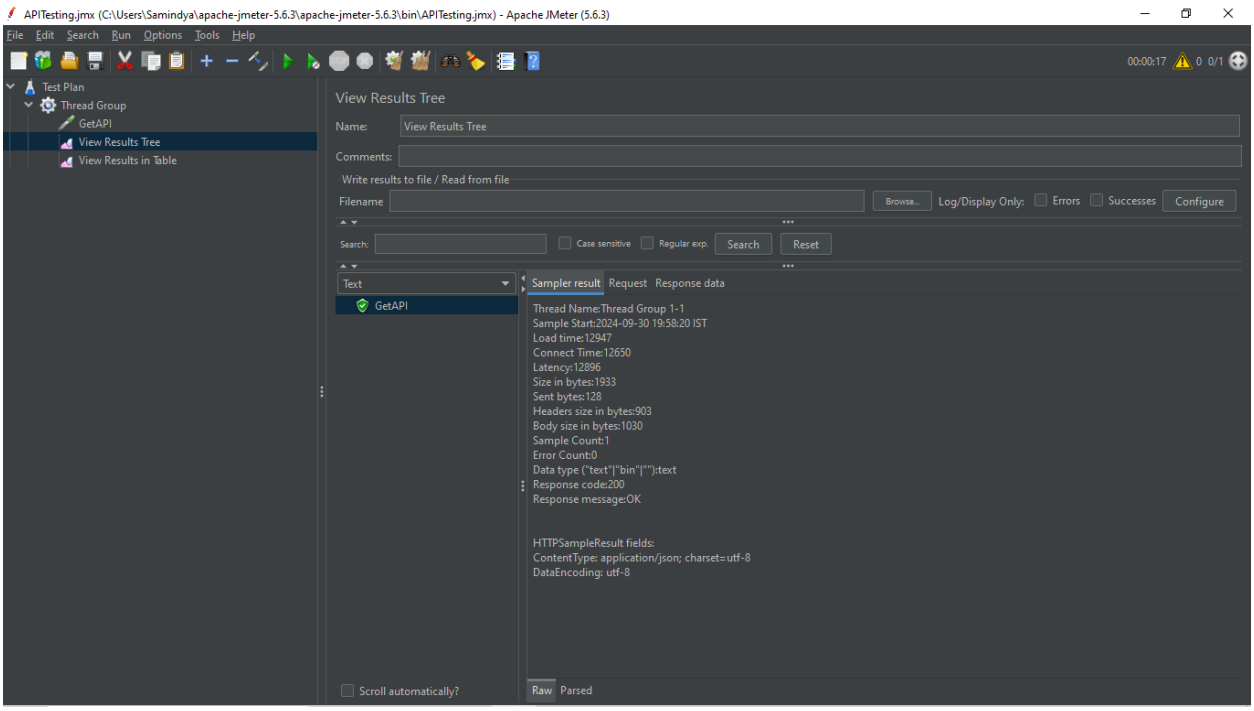
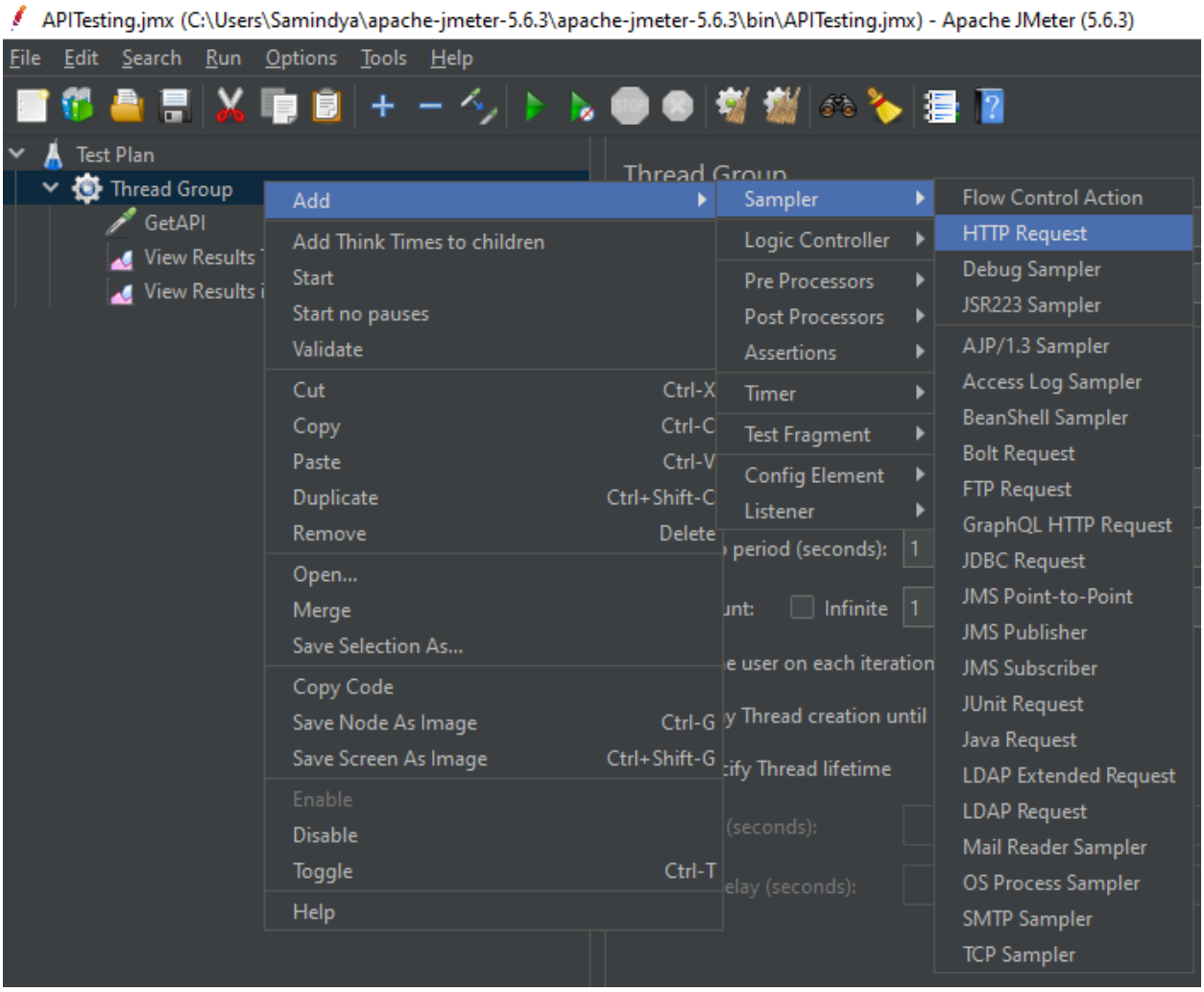


Run the test

- Now, save the test and run it
- For running the test, click the green button



API Testing: POST METHOD


APITesting.jmx (C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\APITesting.jmx) - Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
Test Plan
Thread Group
GetAPI
View Results
View Results
Add
Add Think Times to children
Start
Start no pauses
Validate
Cut Ctrl-X
Copy Ctrl-C
Paste Ctrl-V
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Assertions
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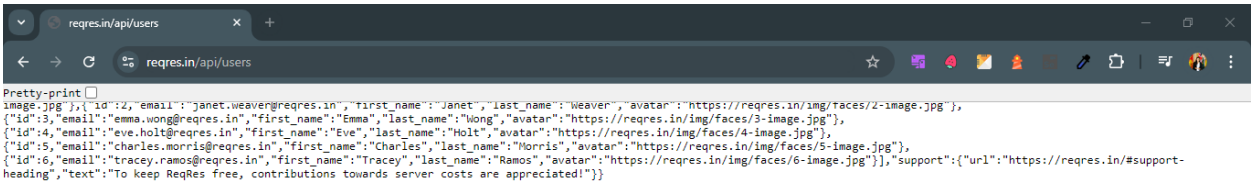
Test Fragment
Config Element
Listener
Flow Control Action
HTTP Request
Debug Sampler
JSR223 Sampler
AJP/1.3 Sampler
Access Log Sampler
BeanShell Sampler
Bolt Request
FTP Request
GraphQL HTTP Request
JDBC Request
JMS Point-to-Point
JMS Publisher
JMS Subscriber
JUnit Request
Java Request
LDAP Extended Request
LDAP Request
Mail Reader Sampler
OS Process Sampler
SMTP Sampler
TCP Sampler

POST CREATE


reqres.in/api/users
reqres.in/api/users
Pretty-print
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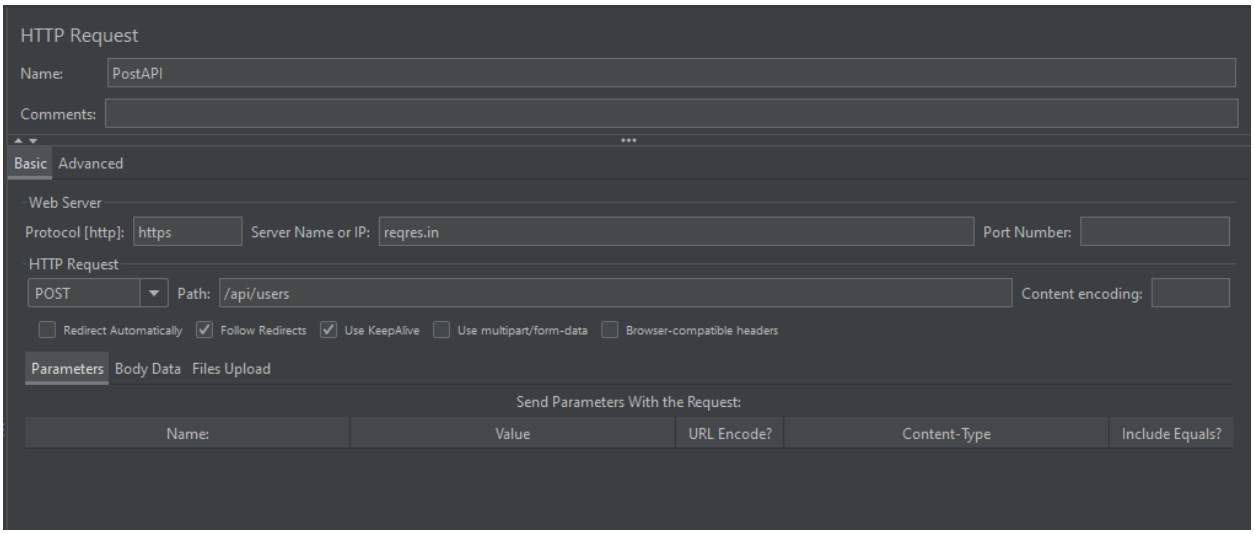

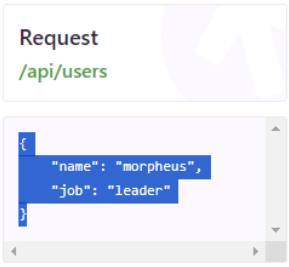

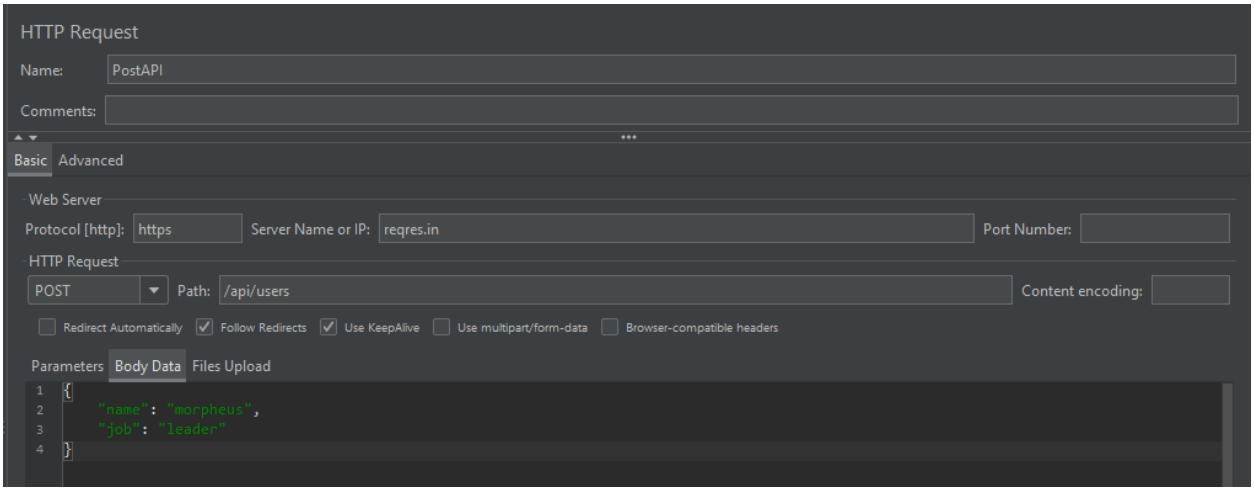

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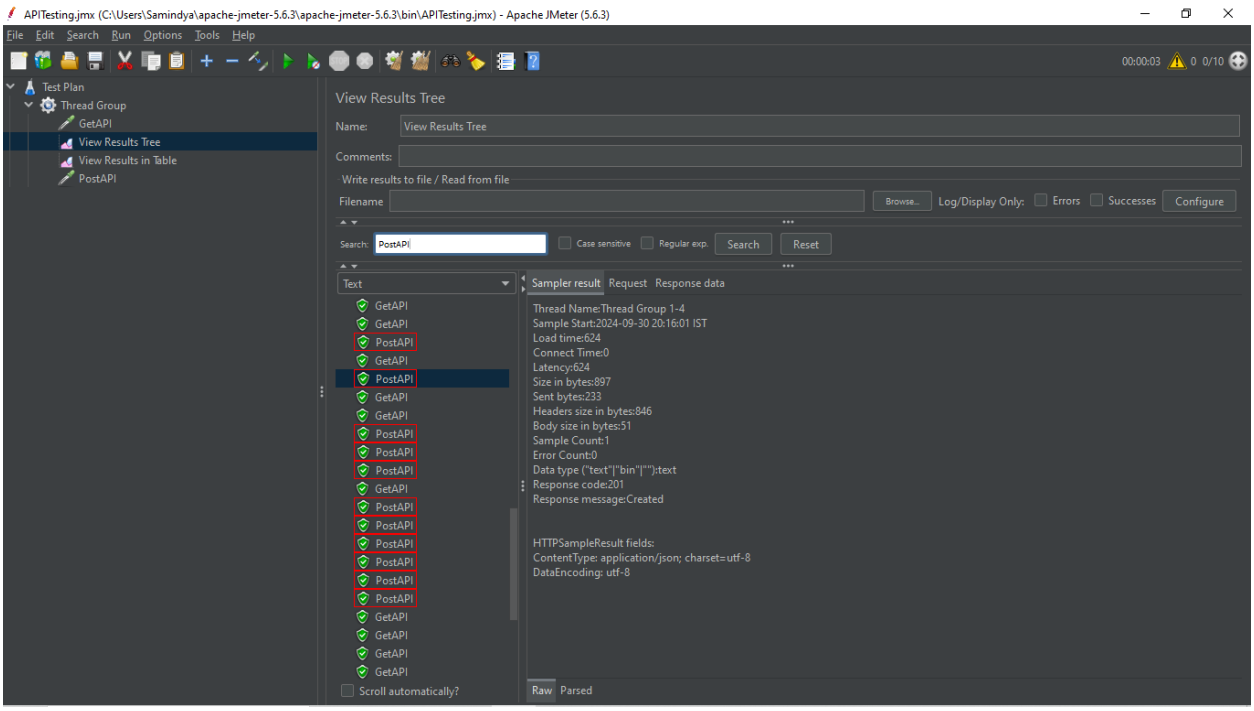
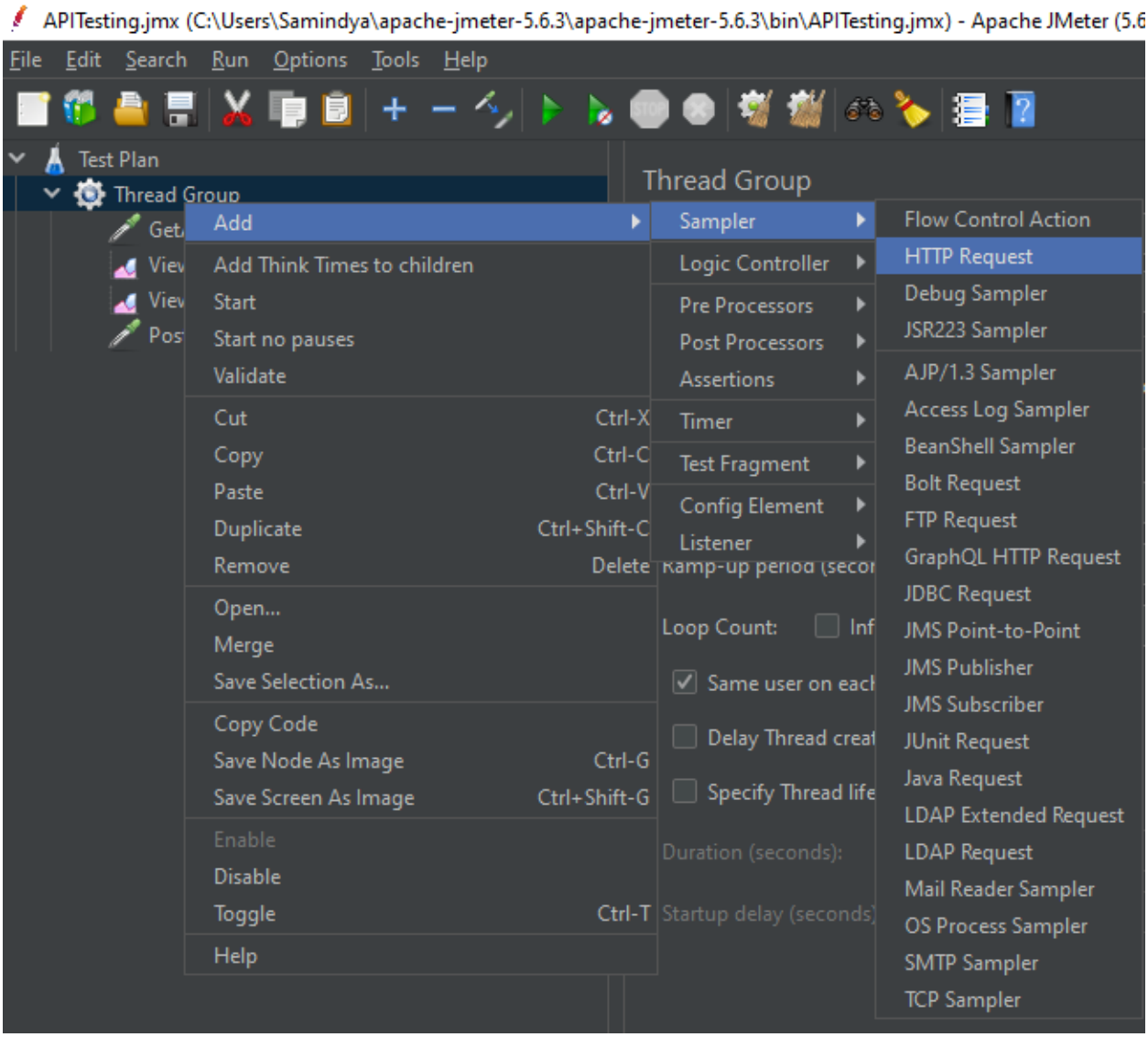


API Testing: PUT METHOD


APITesting.jmx (C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\APITesting.jmx) - Apache JMeter (5.6
File Edit Search Run Options Tools Help
Test Plan
Thread Group
Thread Group
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Add Think Times to children
Start
Start no pauses
Validate
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Remove Delete
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Merge
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Save Node As Image Ctrl-G
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Sampler
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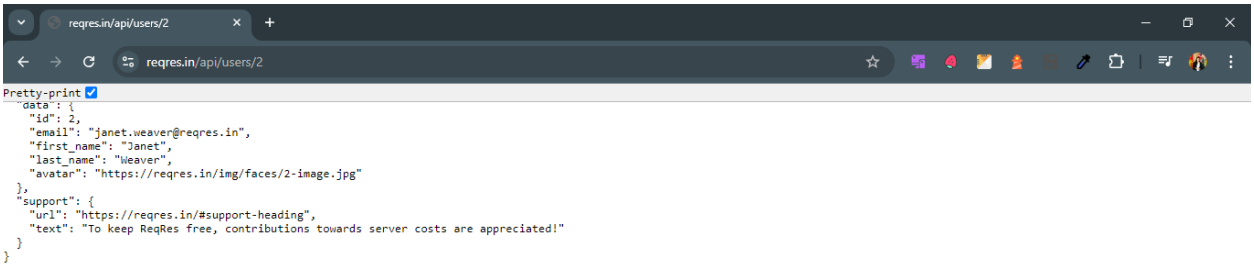
Pre Processors
Post Processors
Assertions
Timer
Test Fragment
Config Element
Listener
Loop Count:
Same user on each
Delay Thread creat
Specify Thread life
Duration (seconds):
Startup delay (seconds)
Flow Control Action
HTTP Request
Debug Sampler
JSR223 Sampler
AJP/1.3 Sampler
Access Log Sampler
BeanShell Sampler
Bolt Request
FTP Request
GraphQL HTTP Request
JDBC Request
JMS Point-to-Point
JMS Publisher
JMS Subscriber
JUnit Request
Java Request
LDAP Extended Request
LDAP Request
Mail Reader Sampler
OS Process Sampler
SMTP Sampler
TCP Sampler

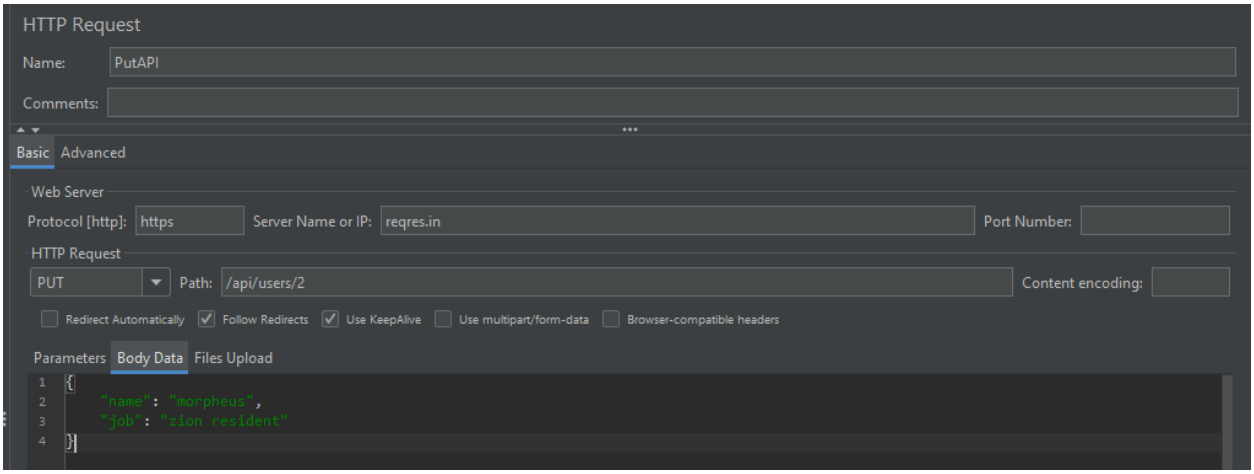
PUT UPDATE

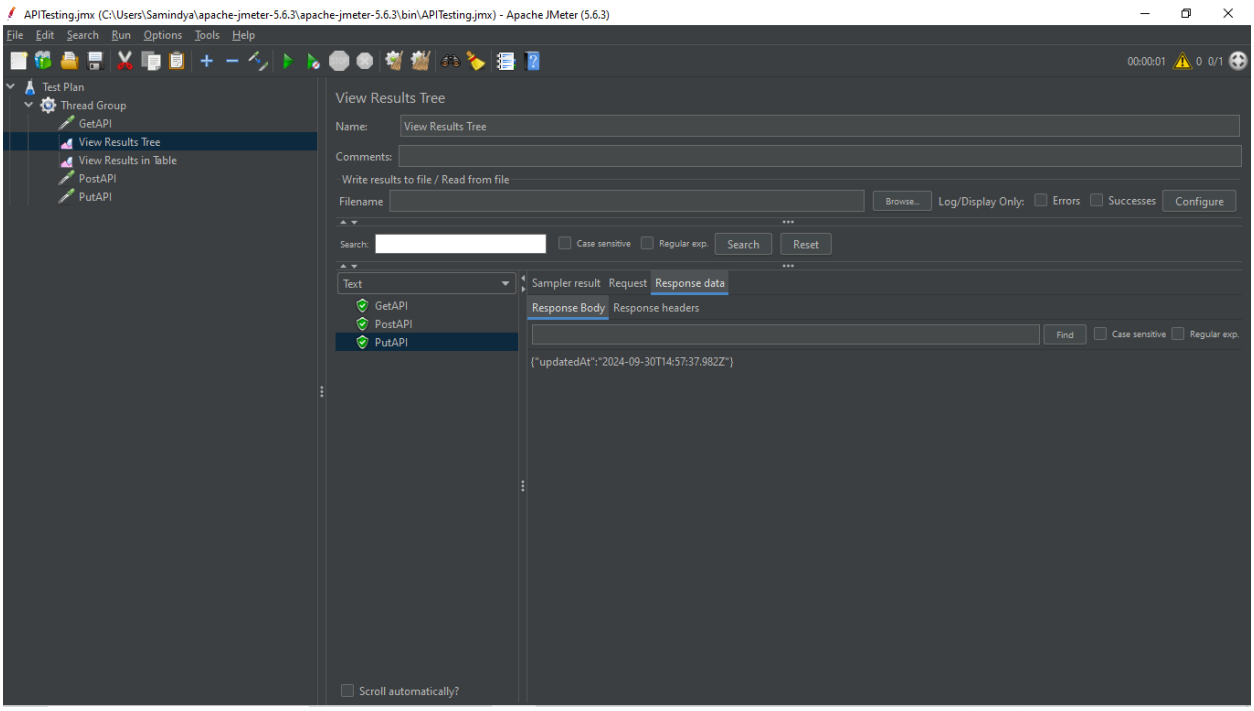

reqres.in/api/users/2
reqres.in/api/users/2
Pretty-print
{
"data": {
"id": 2,
"email": "janet.weaver@reqres.in",
"first_name": "Janet",
"last_name": "Weaver",
"avatar": "https://reqres.in/img/faces/2-image.jpg"
},
"support": {
"url": "https://reqres.in/#support-heading",
"text": "To keep ReqRes free, contributions towards server costs are appreciated!"
}
}

Request

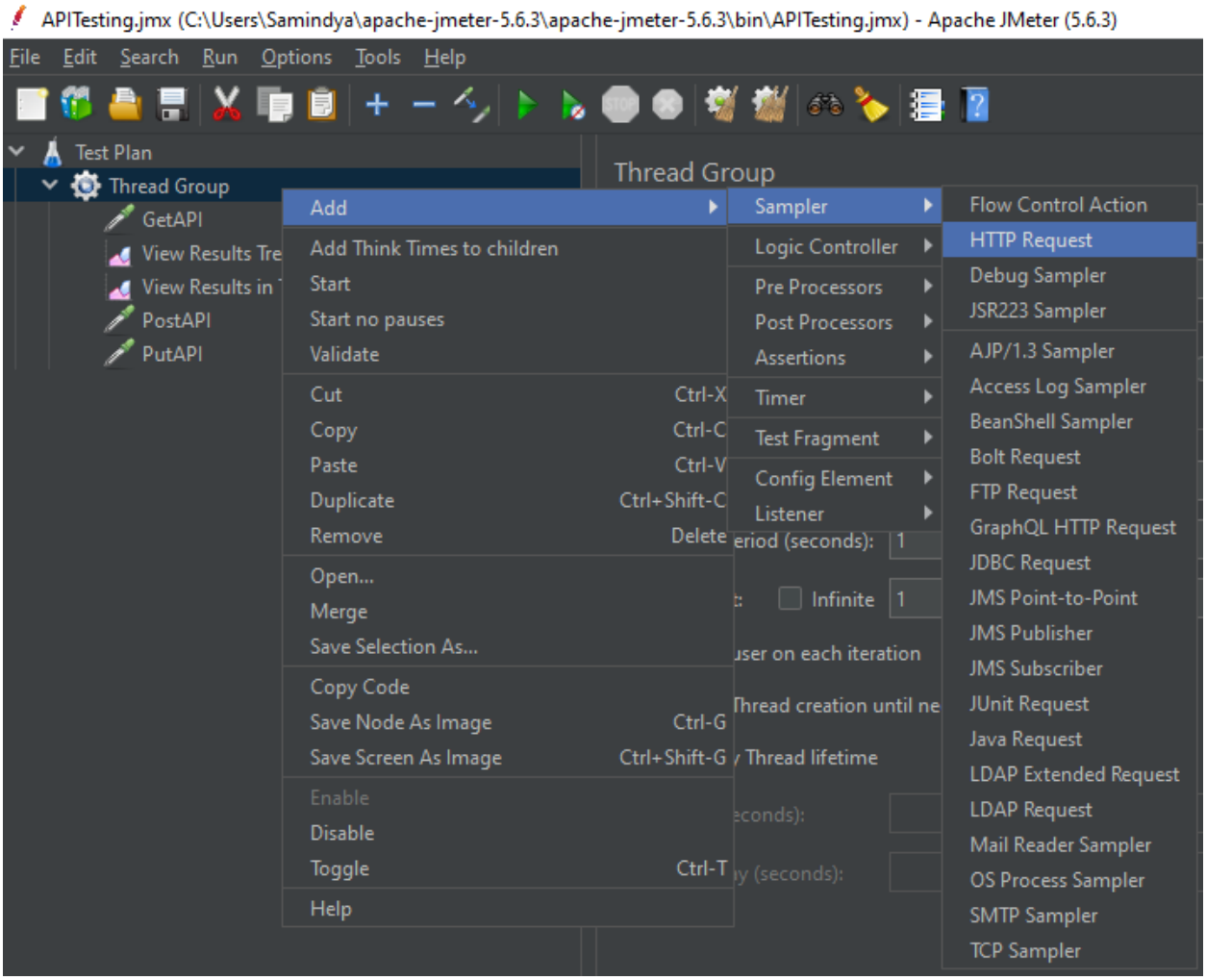
/api/users/2

```
{
    "name": "morpheus",
    "job": "zion resident"
}
```

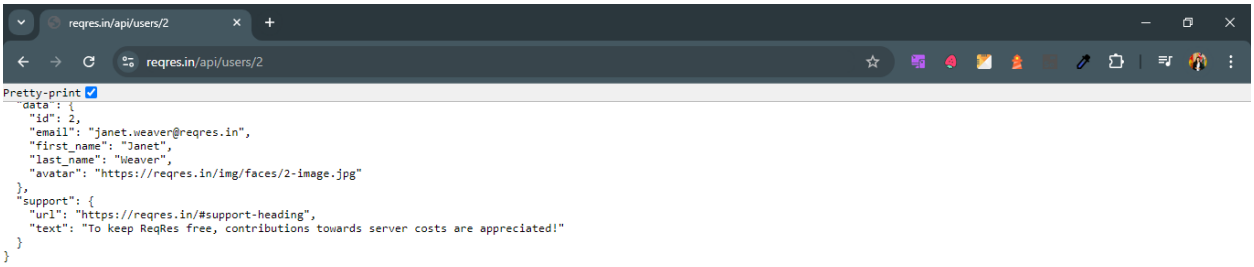




API Testing: DELETE METHOD


APITesting.jmx (C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\APITesting.jmx) - Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
Test Plan
Thread Group
GetAPI
View Results Tre
View Results in
PostAPI
PutAPI
Thread Group
Add
Add Think Times to children
Start
Start no pauses
Validate
Cut Ctrl-X
Copy Ctrl-C
Paste Ctrl-V
Duplicate Ctrl+Shift-C
Remove Delete
Open...
Merge
Save Selection As...
Copy Code
Save Node As Image Ctrl-G
Save Screen As Image Ctrl+Shift-G
Enable
Disable
Toggle Ctrl-T
Help
Sampler
Logic Controller
Pre Processors
Post Processors
Assertions
Timer
Test Fragment
Config Element
Listener
eriod (seconds): 1
Infinite 1
user on each iteration
Thread creation until ne
Thread lifetime
econds):
y (seconds):
Flow Control Action
HTTP Request
Debug Sampler
JSR223 Sampler
AJP/1.3 Sampler
Access Log Sampler
BeanShell Sampler
Bolt Request
FTP Request
GraphQL HTTP Request
JDBC Request
JMS Point-to-Point
JMS Publisher
JMS Subscriber
JUnit Request
Java Request
LDAP Extended Request
LDAP Request
Mail Reader Sampler
OS Process Sampler
SMTP Sampler
TCP Sampler

DELETE
DELETE


reqres.in/api/users/2
reqres.in/api/users/2
Pretty-print
{
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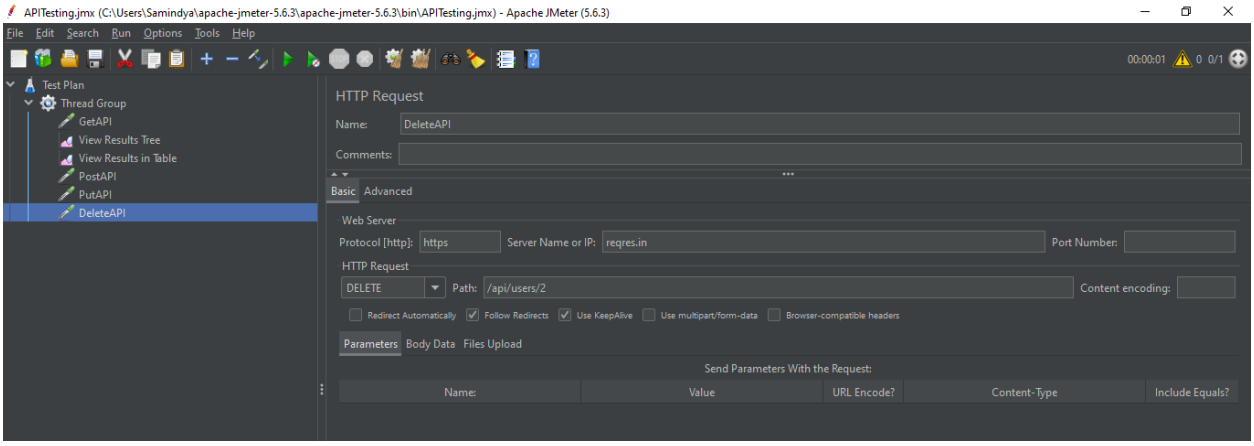
"last_name": "Weaver",
"avatar": "https://reqres.in/img/faces/2-image.jpg"
},
"support": {
"url": "https://reqres.in/#support-heading",
"text": "To keep ReqRes free, contributions towards server costs are appreciated!"
}
}


APITesting.jmx (C:\Users\Samindya\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\APITesting.jmx) - Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
00:00:01 0 0/1
Test Plan
Thread Group
GetAPI
View Results Tree
View Results in Table
PostAPI
PutAPI
DeleteAPI
HTTP Request
Name: DeleteAPI
Comments:
Basic Advanced
Web Server
Protocol [http]: https
Server Name or IP: reqres.in
Port Number:
HTTP Request
DELETE
Path: /api/users/2
Content encoding:
Redirect Automatically
Follow Redirects
Use KeepAlive
Use multipart/form-data
Browser-compatible headers
Parameters Body Data Files Upload
Send Parameters With the Request:
Name:
Value
URL Encode?
Content-Type
Include Equals?