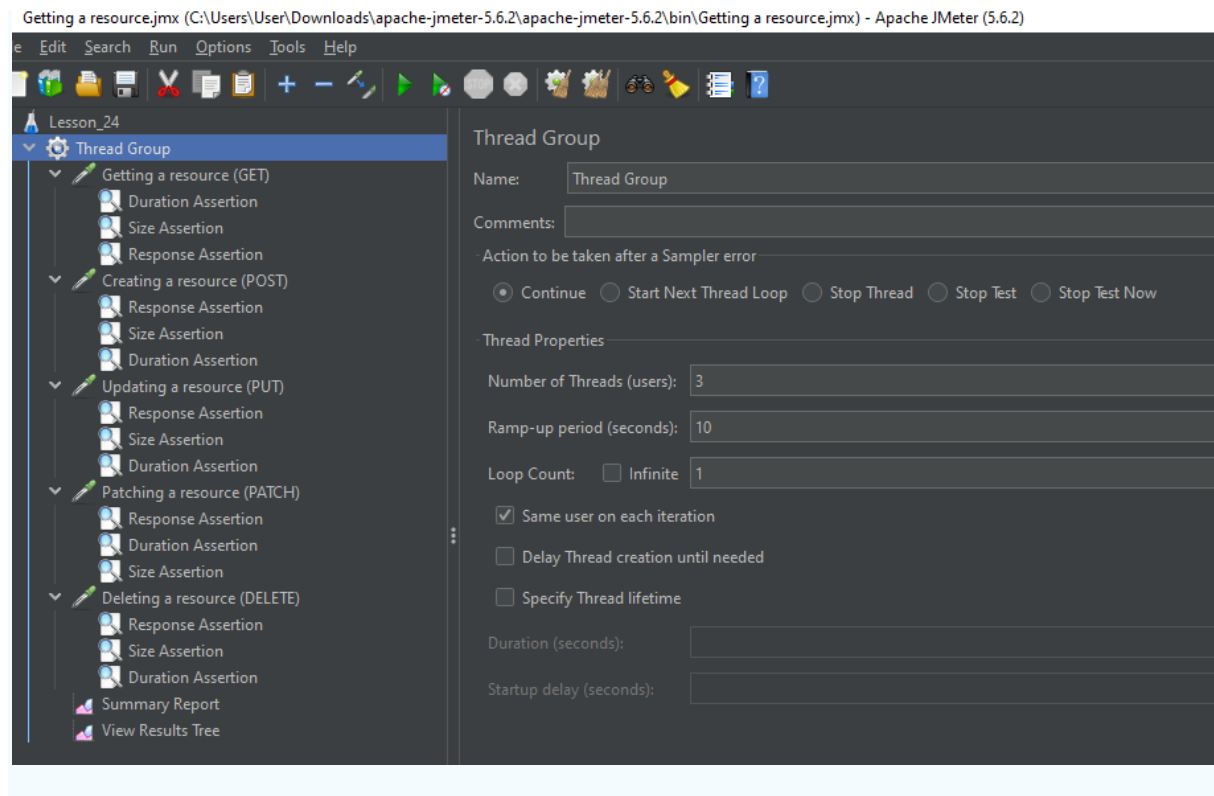


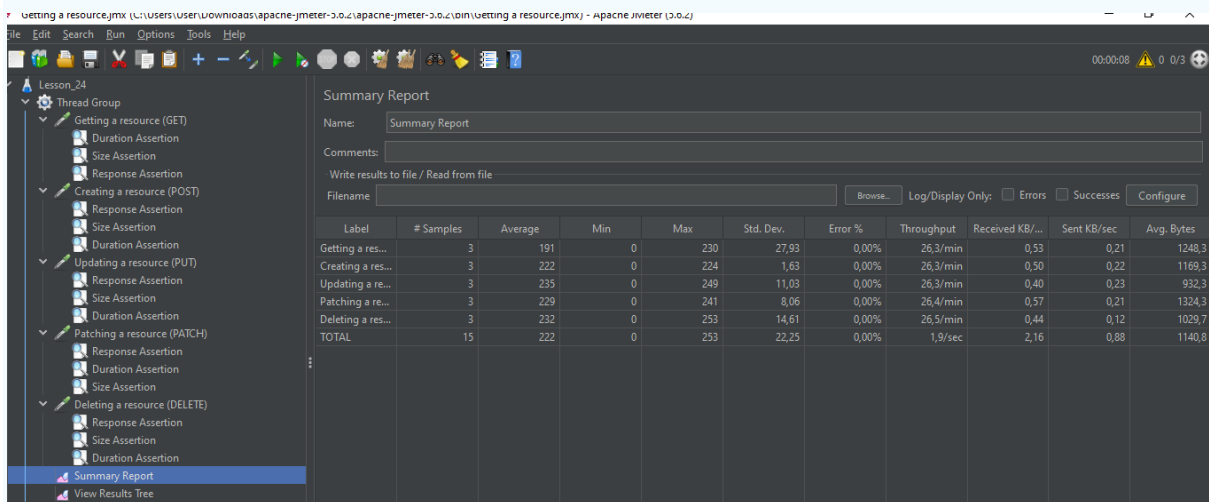
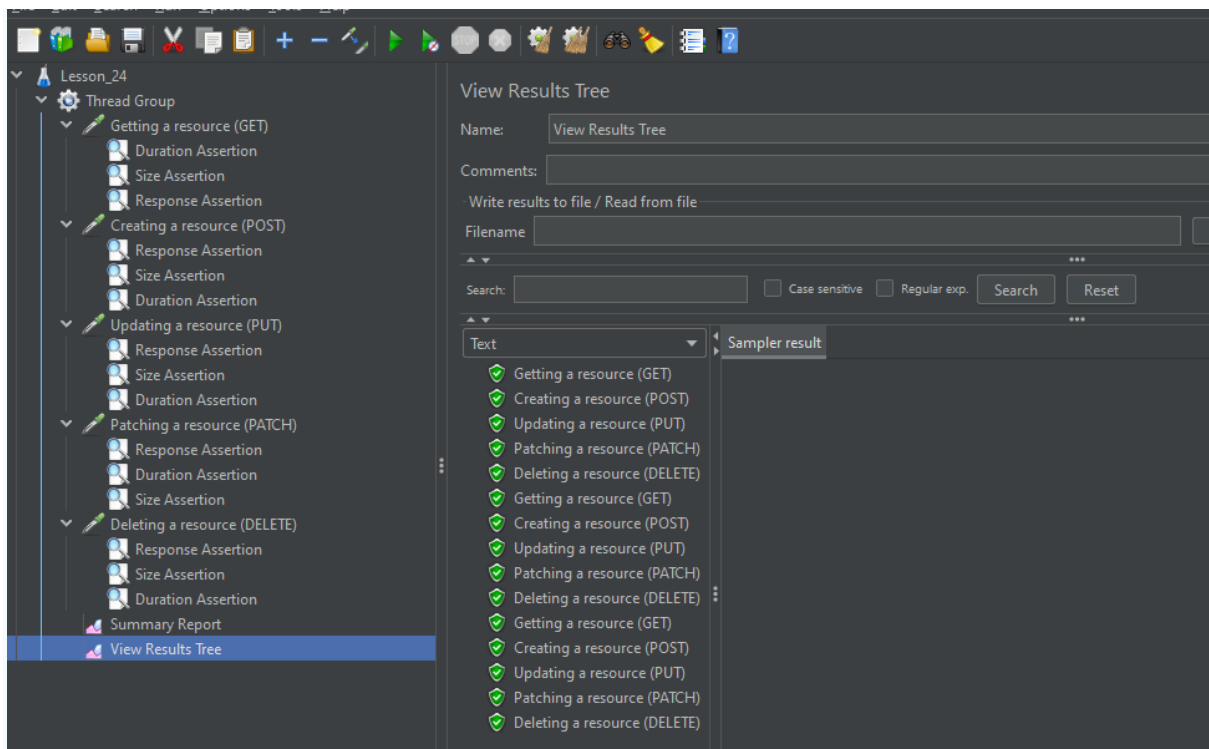
1. Створи набір з GET, POST, PUT, PATCH, DELETE запитів до JSONPlaceholder, які надсилаються протягом 10 секунд у 3 ітерації.

2. До кожного з запитів застосуй 3 різних assert'и.

3. Результати виконання тестів мають бути отримані за такими Listener'ами:

- View Results in Tree
- Summary Report.

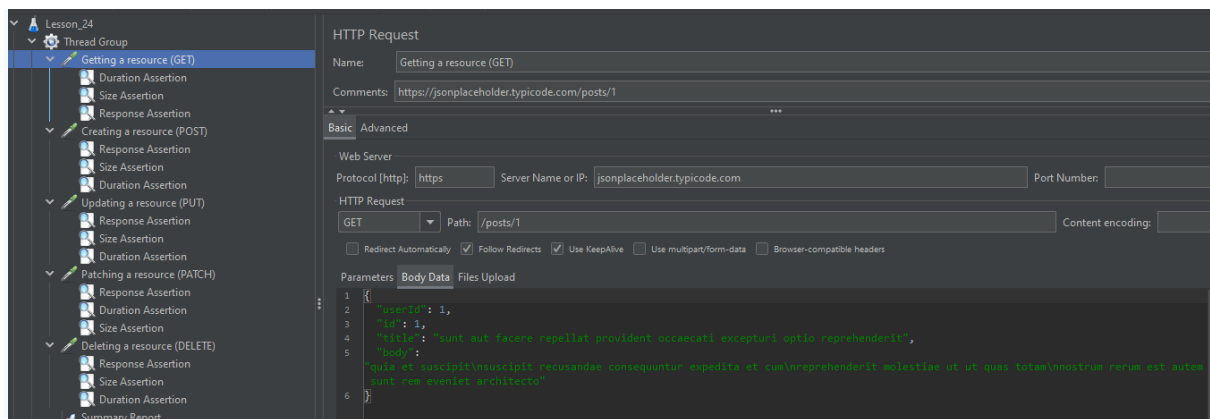




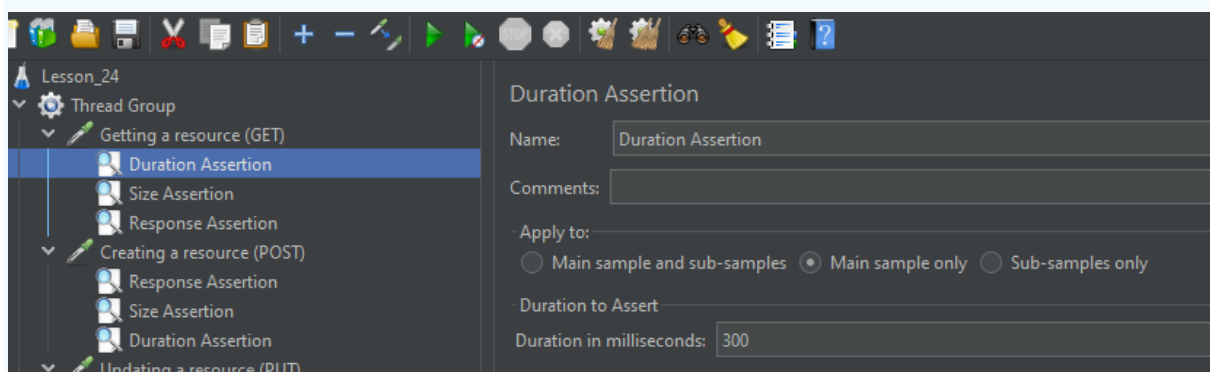
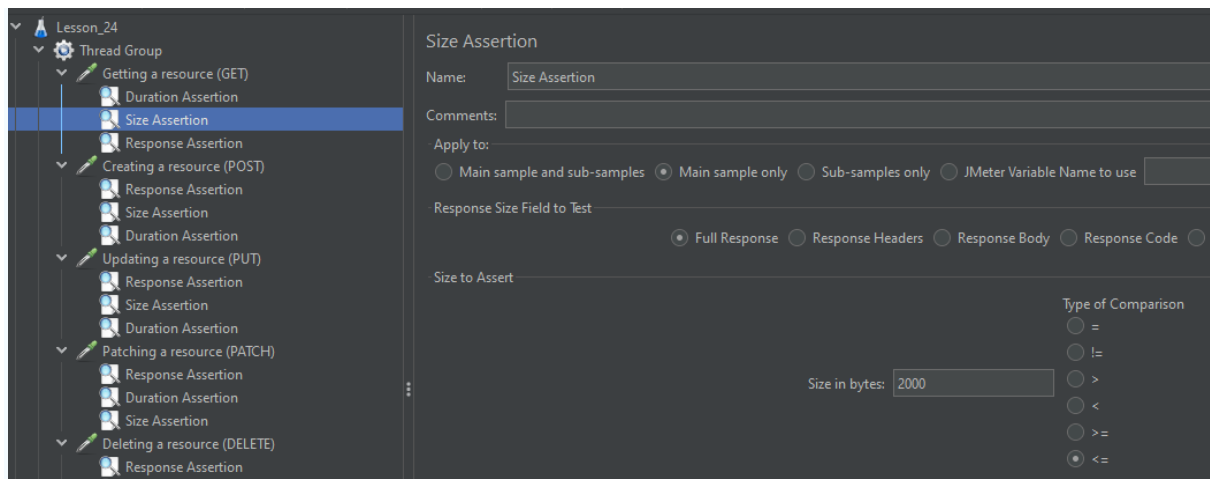
4. Опиши висновки щодо результатів тестування (базуючись на репортерах) в окремому файлі.

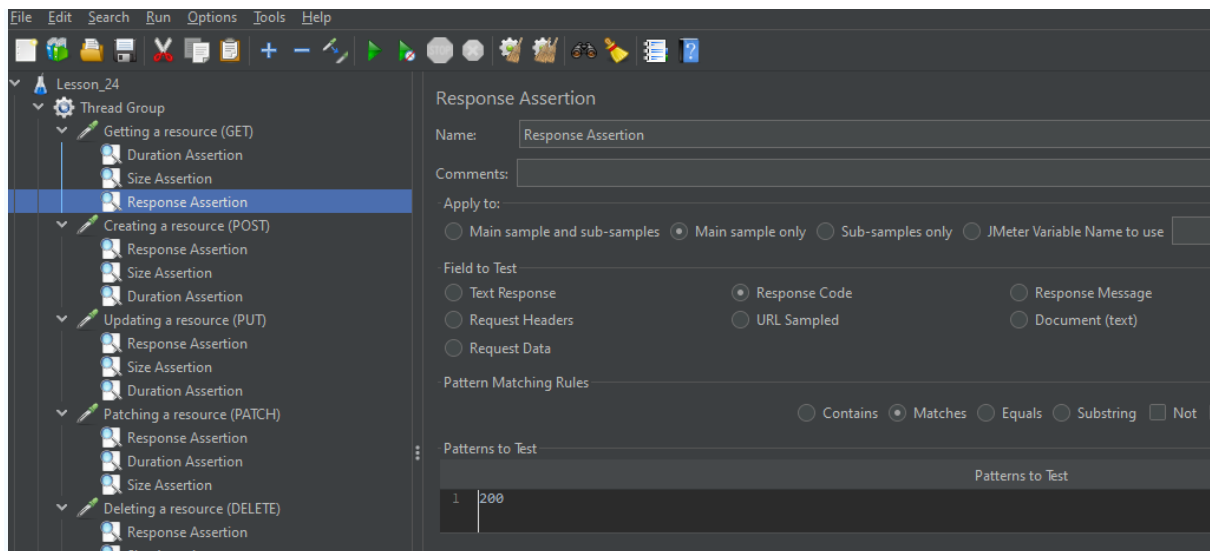
Тестування проходить в тест-плані "Lesson_24" по всім запитам одночасно:

1. Getting a resource (GET):

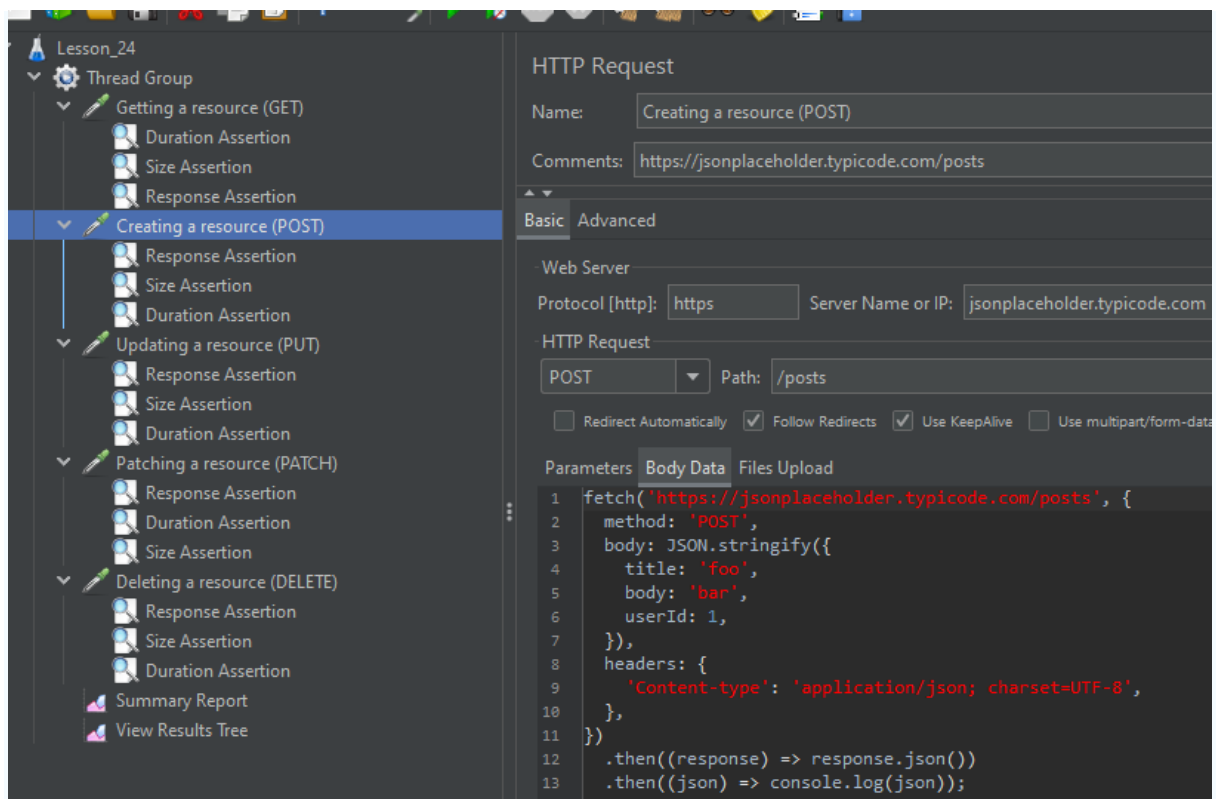


• Assertions (GET)

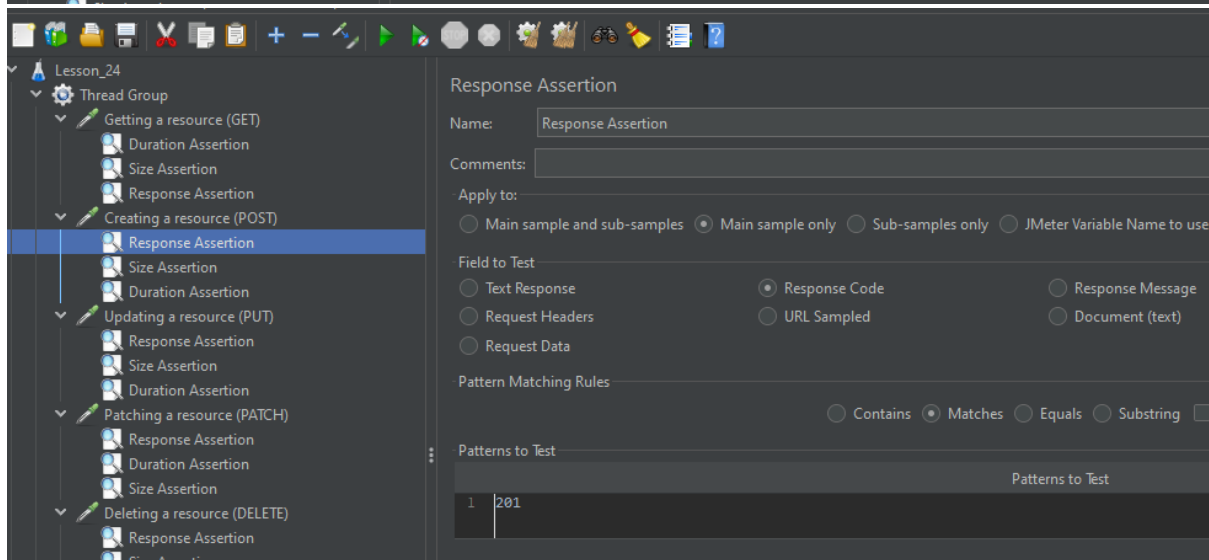
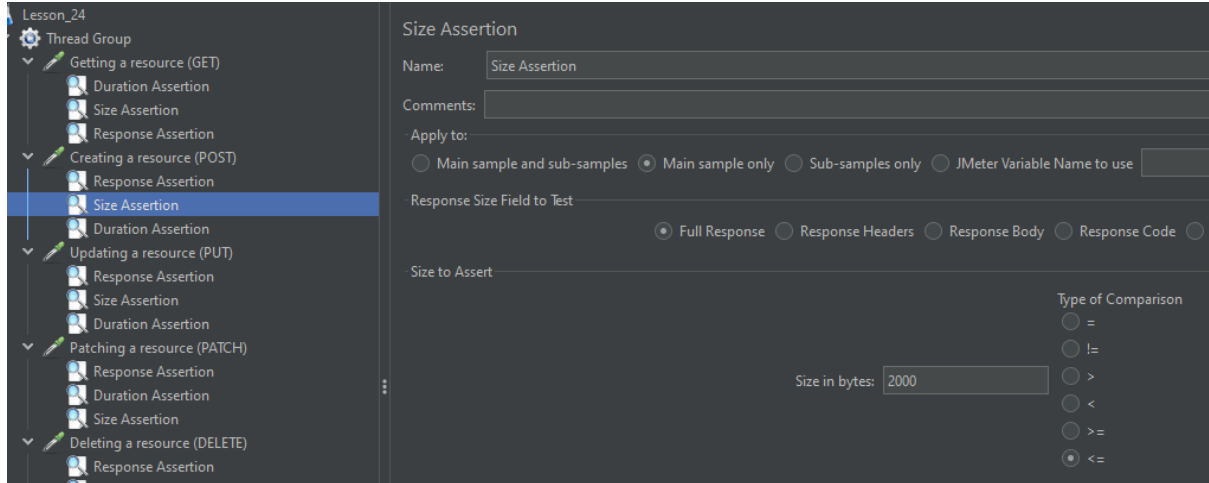
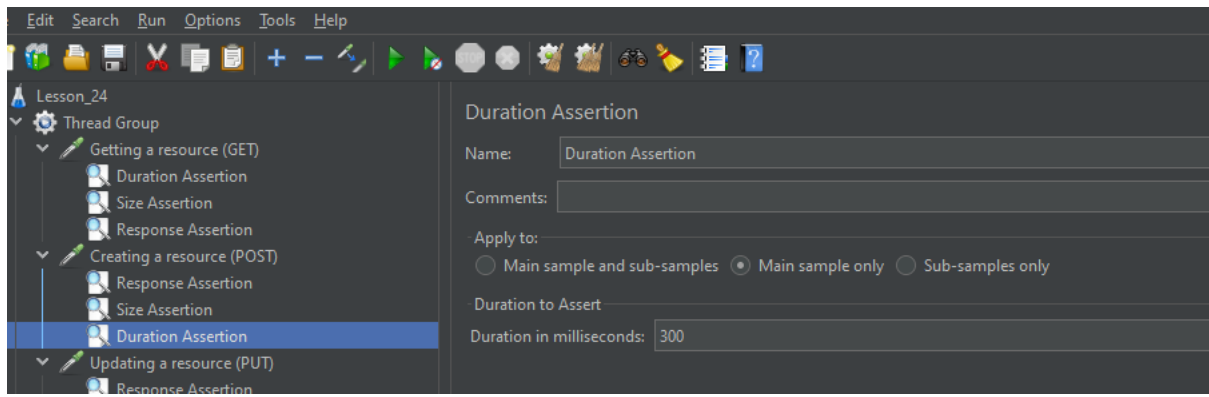




2. Creating a resource (POST):



- Assertions (POST)



3. Updating a resource (PUT):

The screenshot shows the 'HTTP Request' configuration panel. The 'Name' field is 'Updating a resource (PUT)' and the 'Comments' field is 'https://jsonplaceholder.typicode.com/posts/1'. The 'Basic' tab is selected, showing the 'Web Server' section with 'Protocol [http]: https' and 'Server Name or IP: jsonplaceholder.typicode.com'. The 'HTTP Request' section shows the method 'PUT' and the path '/posts/1'. The 'Parameters' tab is also visible, showing a JSON body for the PUT request.

HTTP Request

Name: Updating a resource (PUT)

Comments: https://jsonplaceholder.typicode.com/posts/1

Basic Advanced

Web Server

Protocol [http]: https Server Name or IP: jsonplaceholder.typicode.com

HTTP Request

PUT Path: /posts/1

☐ Redirect Automatically ☒ Follow Redirects ☒ Use KeepAlive ☐ Use multipart/form-data

Parameters Body Data Files Upload

```
1 fetch('https://jsonplaceholder.typicode.com/posts/1', {
2   method: 'PUT',
3   body: JSON.stringify({
4     id: 1,
5     title: 'foo',
6     body: 'bar',
7     userId: 1,
8   }),
9   headers: {
10    'Content-type': 'application/json; charset=UTF-8',
11  },
12 })
13 .then((response) => response.json())
14 .then((json) => console.log(json));
```

- Assertions (PUT)

The screenshot shows the 'Duration Assertion' configuration panel. The 'Name' field is 'Duration Assertion'. The 'Apply to:' section has three radio buttons: 'Main sample and sub-samples', 'Main sample only' (which is selected), and 'Sub-samples only'. The 'Duration to Assert' section shows 'Duration in milliseconds: 300'.

Duration Assertion

Name: Duration Assertion

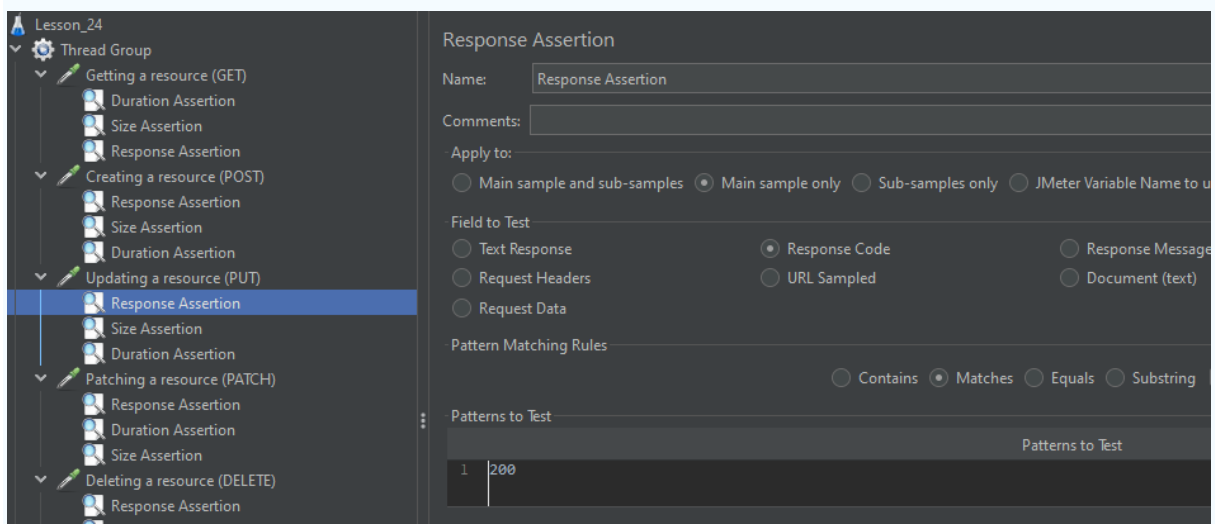
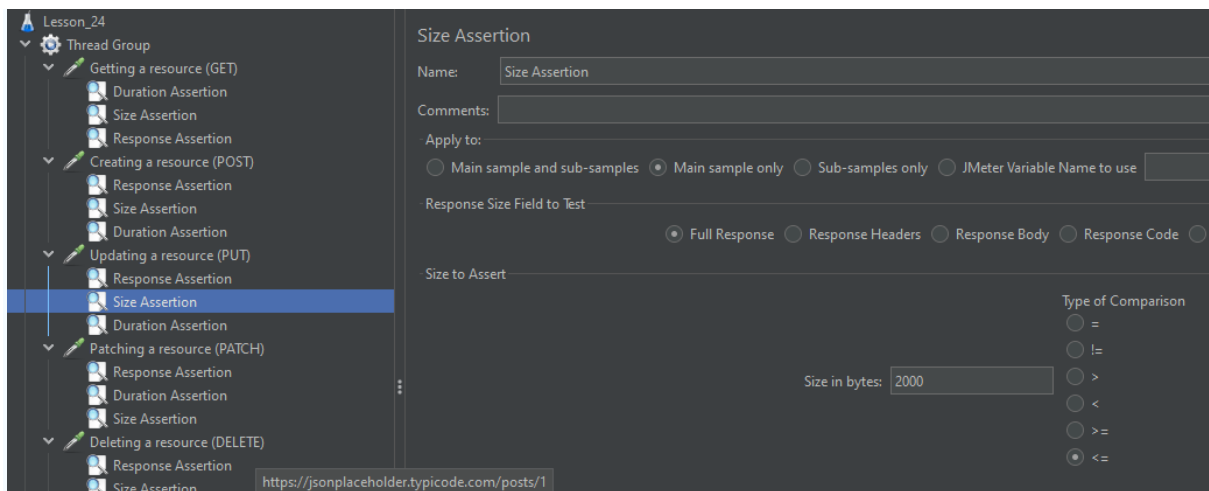
Comments:

Apply to:

☐ Main sample and sub-samples ☒ Main sample only ☐ Sub-samples only

Duration to Assert

Duration in milliseconds: 300



4. Patching a resource (PATCH):

The screenshot shows the JMeter configuration for an HTTP Request. The left sidebar lists a test plan named 'Lesson_24' containing a 'Thread Group' with several test elements: 'Getting a resource (GET)', 'Creating a resource (POST)', 'Updating a resource (PUT)', and 'Patching a resource (PATCH)'. Each of these elements has associated 'Response Assertion', 'Size Assertion', and 'Duration Assertion' components. The 'Patching a resource (PATCH)' element is currently selected.

The main configuration pane for the selected 'Patching a resource (PATCH)' request is shown on the right. It includes the following fields:

- Name:** Patching a resource (PATCH)
- Comments:** https://jsonplaceholder.typicode.com/posts/1
- Basic Tab:**
 - Web Server:**
 - Protocol [http]:** https
 - Server Name or IP:** jsonplaceholder.typicode.com
 - HTTP Request:**
 - Method:** PATCH
 - Path:** /posts/1
 - Options:** ☐ Redirect Automatically, ☒ Follow Redirects, ☒ Use KeepAlive, ☐ Use multipart/form-data
- Body Data Tab:**

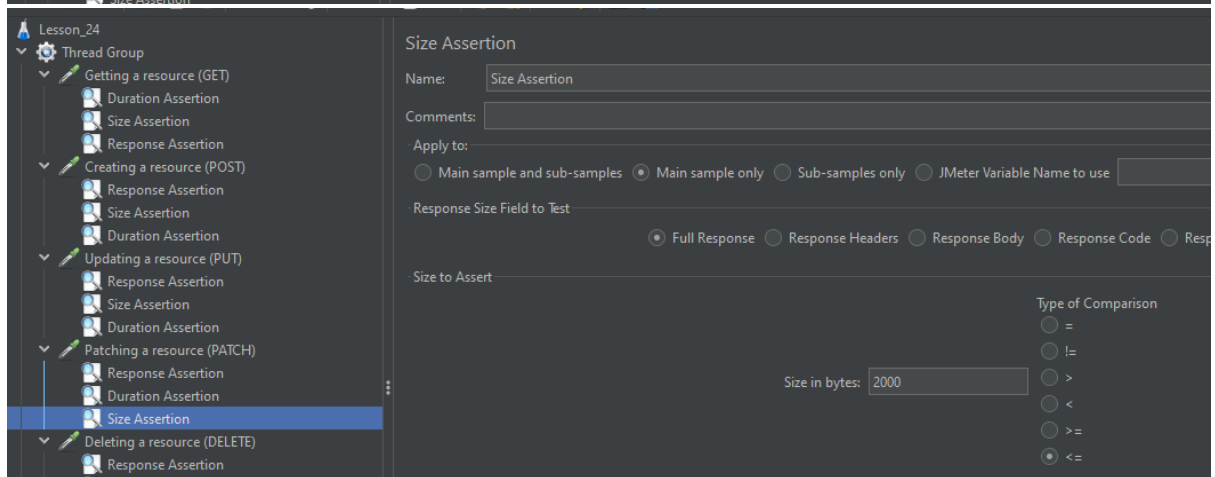
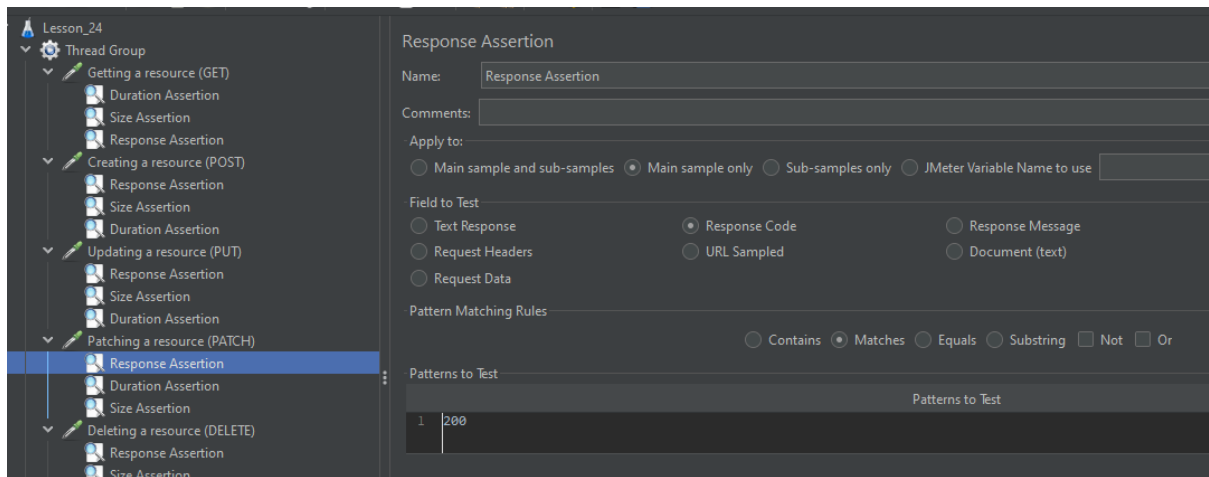
```
1 fetch('https://jsonplaceholder.typicode.com/posts/1', {
2   method: 'PATCH',
3   body: JSON.stringify({
4     title: 'foo',
5   }),
6   headers: {
7     'Content-type': 'application/json; charset=UTF-8',
8   },
9 })
10 .then((response) => response.json())
11 .then((json) => console.log(json));
```

- Assertions (PATCH)

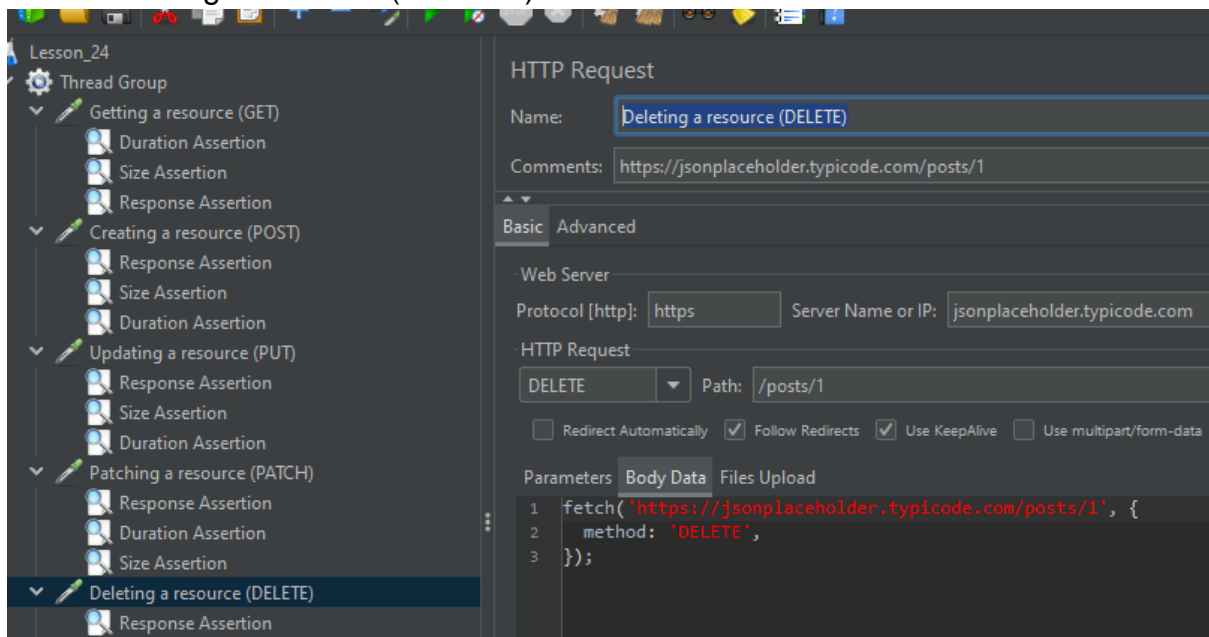
This screenshot shows the configuration for a 'Duration Assertion' in JMeter. The left sidebar is identical to the previous image, with 'Lesson_24' and its 'Thread Group' containing the same sequence of test elements. In this view, the 'Duration Assertion' component under the 'Patching a resource (PATCH)' element is selected.

The configuration pane for the 'Duration Assertion' is displayed on the right with the following settings:

- Name:** Duration Assertion
- Comments:** (empty)
- Apply to:** ☐ Main sample and sub-samples, ☒ Main sample only, ☐ Sub-samples only
- Duration to Assert:** (empty)
- Duration in milliseconds:** 300



5. Deleting a resource (DELETE):



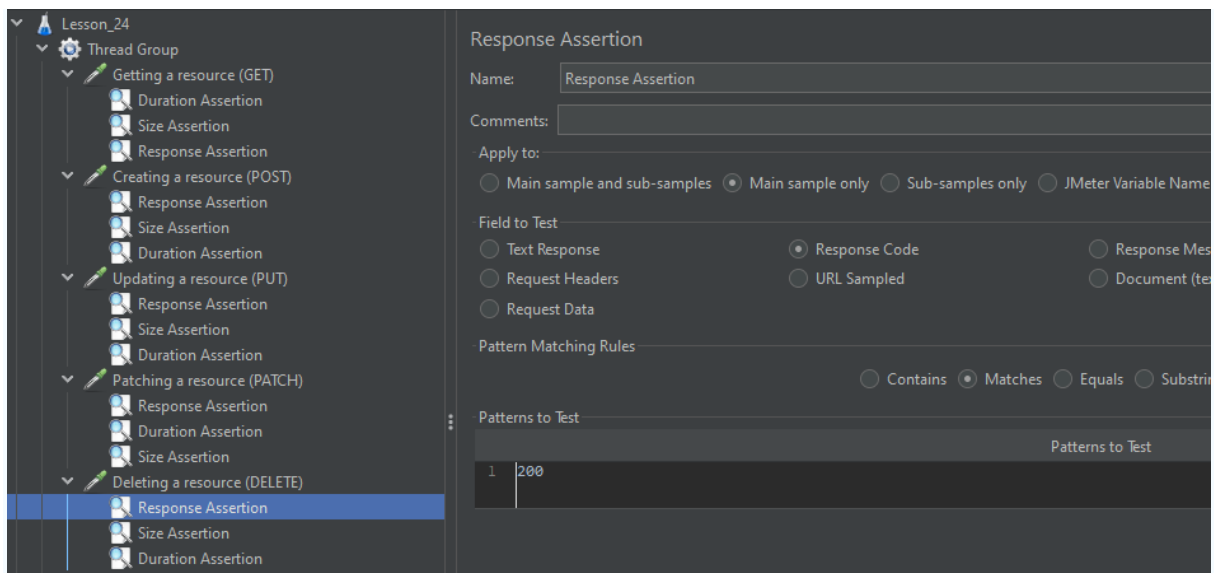
- Assertions (DELETE)

The screenshot shows the JMeter GUI with a tree view on the left and a configuration panel on the right. The tree view is expanded to 'Deleting a resource (DELETE)', which contains a 'Duration Assertion'. The configuration panel on the right is titled 'Duration Assertion' and contains the following fields:

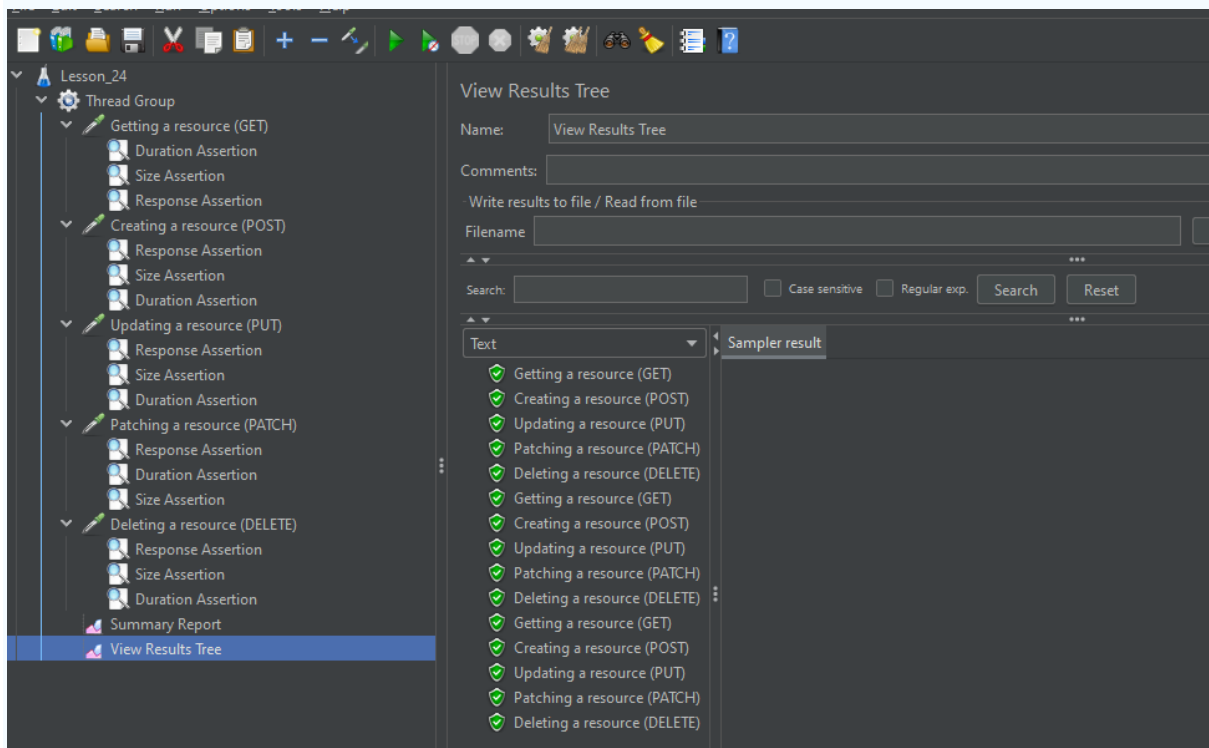
- Name:
- Comments:
- Apply to: ☐ Main sample and sub-samples ☒ Main sample only ☐ Sub-samples only
- Duration to Assert:
- Duration in milliseconds:

The screenshot shows the JMeter GUI with a tree view on the left and a configuration panel on the right. The tree view is expanded to 'Deleting a resource (DELETE)', which contains a 'Size Assertion'. The configuration panel on the right is titled 'Size Assertion' and contains the following fields:

- Name:
- Comments:
- Apply to: ☐ Main sample and sub-samples ☒ Main sample only ☐ Sub-samples only ☐ JMeter Variable Name to use
- Response Size Field to Test: ☒ Full Response ☐ Response Headers ☐ Response Body ☐ Response Code ☐
- Size to Assert:
- Size in bytes:
- Type of Comparison: ☐ = ☐ != ☐ > ☐ < ☐ >= ☒ <=



Всі запити в тест-плані “Lesson_24” виконуються без помилок с вказаними параметрами.



Summary Report

Name: Summary Report

Comments:

Write results to file / Read from file

Filename: Log/Display Only: ☐ Errors ☐ Successes

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
Getting a res...	3	191	0	230	27.93	0,00%	26,3/min	0,53	0,21	1248,3
Creating a res...	3	222	0	224	1,63	0,00%	26,3/min	0,50	0,22	1169,3
Updating a re...	3	235	0	249	11,03	0,00%	26,3/min	0,40	0,23	932,3
Patching a re...	3	229	0	241	8,06	0,00%	26,4/min	0,57	0,21	1324,3
Deleting a res...	3	232	0	253	14,61	0,00%	26,5/min	0,44	0,12	1029,7
TOTAL	15	222	0	253	22,25	0,00%	1,9/sec	2,16	0,88	1140,8

5. Створений тест-план та документ з описом результатів виконання репортерів додай в свій репозиторій в GitHub.

<https://github.com/OlenaUkrain/PatOlena1103.git>

```

MINGW64:/c/Users/User/PatOlena1103
User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  Getting a resource.jmx
  Test plan Lesson_24.docx

nothing added to commit but untracked files present (use "git add" to track)

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git add .
warning: in the working copy of 'Getting a resource.jmx', LF will be replaced by CRLF the
next time Git touches it

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git commit -m "Add new file"
[main 431f1fc] Add new file
2 files changed, 392 insertions(+)
create mode 100644 Getting a resource.jmx
create mode 100644 Test plan Lesson_24.docx

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 2 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 1.34 MiB | 1.04 MiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/OlenaUkrain/PatOlena1103.git
73da80f..431f1fc main -> main

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$

```

2. Створи новий тест-план на основі тест-плану з попереднього рівня. В ньому:

- для кожного із запитів зроби стрес-тест використаного API;
- потрібно виявити такі мінімальні комбінації параметрів, за яких вебсервіс перестане витримувати навантаження.

а) запити не виконуються при зміні часу завантаження;

Search: ☐ Case sensitive ☐ Regular exp.

Text

- > Getting a resource (GET)
- > Creating a resource (POST)
- > Updating a resource (PUT)
- > Patching a resource (PATCH)
- > Deleting a resource (DELETE)
- > Getting a resource (GET)
- > Creating a resource (POST)
- > Updating a resource (PUT)
- > Patching a resource (PATCH)
- > Deleting a resource (DELETE)
- > Getting a resource (GET)
- > Creating a resource (POST)
- > Updating a resource (PUT)
- > Patching a resource (PATCH)
- > Deleting a resource (DELETE)

Sampler result Request Response data

Thread Name: Thread Group 1-1
Sample Start: 2023-10-10 16:14:06 EEST
Load time: 224
Connect Time: 0
Latency: 224
Size in bytes: 923
Sent bytes: 285
Headers size in bytes: 921
Body size in bytes: 2
Sample Count: 1
Error Count: 1
Data type ("text"|"bin"|""): text
Response code: 200
Response message: OK

HTTPSampleResult fields:
ContentType: application/json; charset=utf-8
DataEncoding: utf-8

Summary Report

Name:

Comments:

Write results to file / Read from file

Filename: Log/Display Only: ☐ Errors ☐ Successes

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/...	Sent KB/sec	Avg. Bytes
Getting a res...	3	188	0	265	56,62	33,33%	26,5/min	0,54	0,21	1246,3
Creating a res...	3	228	0	235	5,31	100,00%	26,6/min	0,51	0,22	1173,3
Updating a re...	3	225	0	229	2,36	100,00%	26,7/min	0,45	0,23	1041,0
Patching a re...	3	224	0	233	6,18	100,00%	26,6/min	0,55	0,21	1270,3
Deleting a re...	3	225	0	226	0,82	100,00%	26,6/min	0,42	0,12	977,0
TOTAL	15	218	0	265	29,71	86,67%	1,9/sec	2,17	0,88	1141,6

Lesson_24 Stress Test

Thread Group

Getting a resource (GET)

Duration Assertion

Size Assertion

Response Assertion

Creating a resource (POST)

Response Assertion

Size Assertion

Duration Assertion

Updating a resource (PUT)

Response Assertion

Size Assertion

Duration Assertion

Patching a resource (PATCH)

Response Assertion

Duration Assertion

Size Assertion

Deleting a resource (DELETE)

Response Assertion

Size Assertion

Duration Assertion

Summary Report

Duration Assertion

Name: Duration Assertion

Comments:

Apply to:
☐ Main sample and sub-samples ☒ Main sample only ☐ Sub-samples only

Duration to Assert

Duration in milliseconds: 200

Lesson_24 Stress Test

Thread Group

Getting a resource (GET)

Duration Assertion

Size Assertion

Response Assertion

Creating a resource (POST)

Response Assertion

Size Assertion

Duration Assertion

Updating a resource (PUT)

Response Assertion

Size Assertion

Duration Assertion

Patching a resource (PATCH)

Response Assertion

Duration Assertion

Size Assertion

Deleting a resource (DELETE)

Response Assertion

Size Assertion

Duration Assertion

Duration Assertion

Name: Duration Assertion

Comments:

Apply to:
☐ Main sample and sub-samples ☒ Main sample only ☐ Sub-samples only

Duration to Assert

Duration in milliseconds: 200

Lesson_24 Stress Test

Thread Group

Getting a resource (GET)

Duration Assertion

Size Assertion

Response Assertion

Creating a resource (POST)

Response Assertion

Size Assertion

Duration Assertion

Updating a resource (PUT)

Response Assertion

Size Assertion

Duration Assertion

Patching a resource (PATCH)

Response Assertion

Size Assertion

Duration Assertion

Duration Assertion

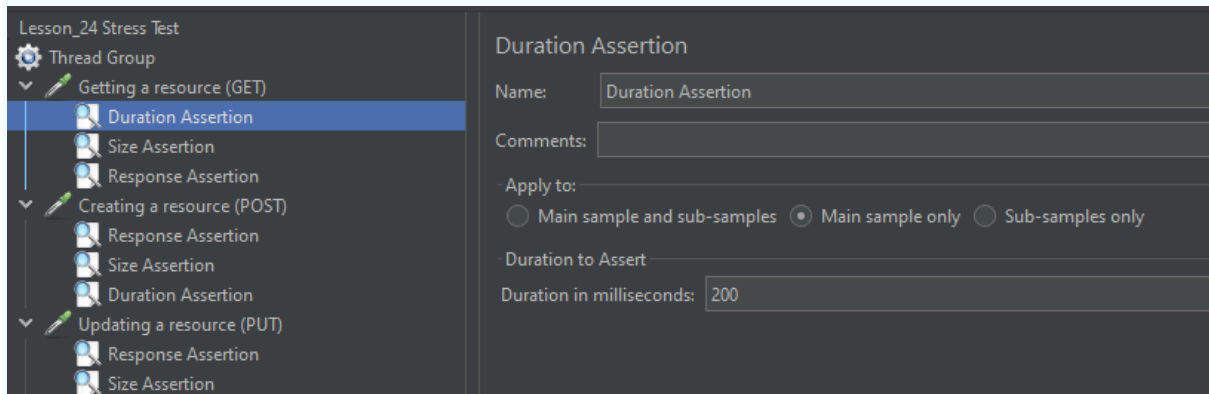
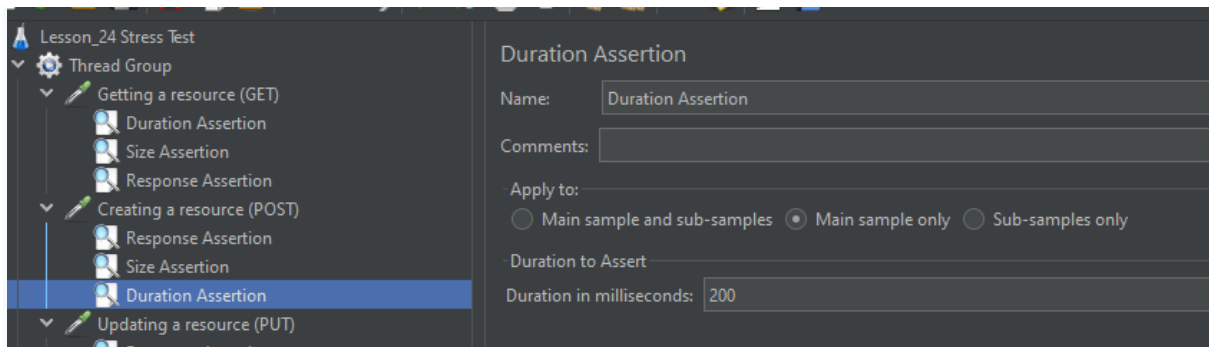
Name: Duration Assertion

Comments:

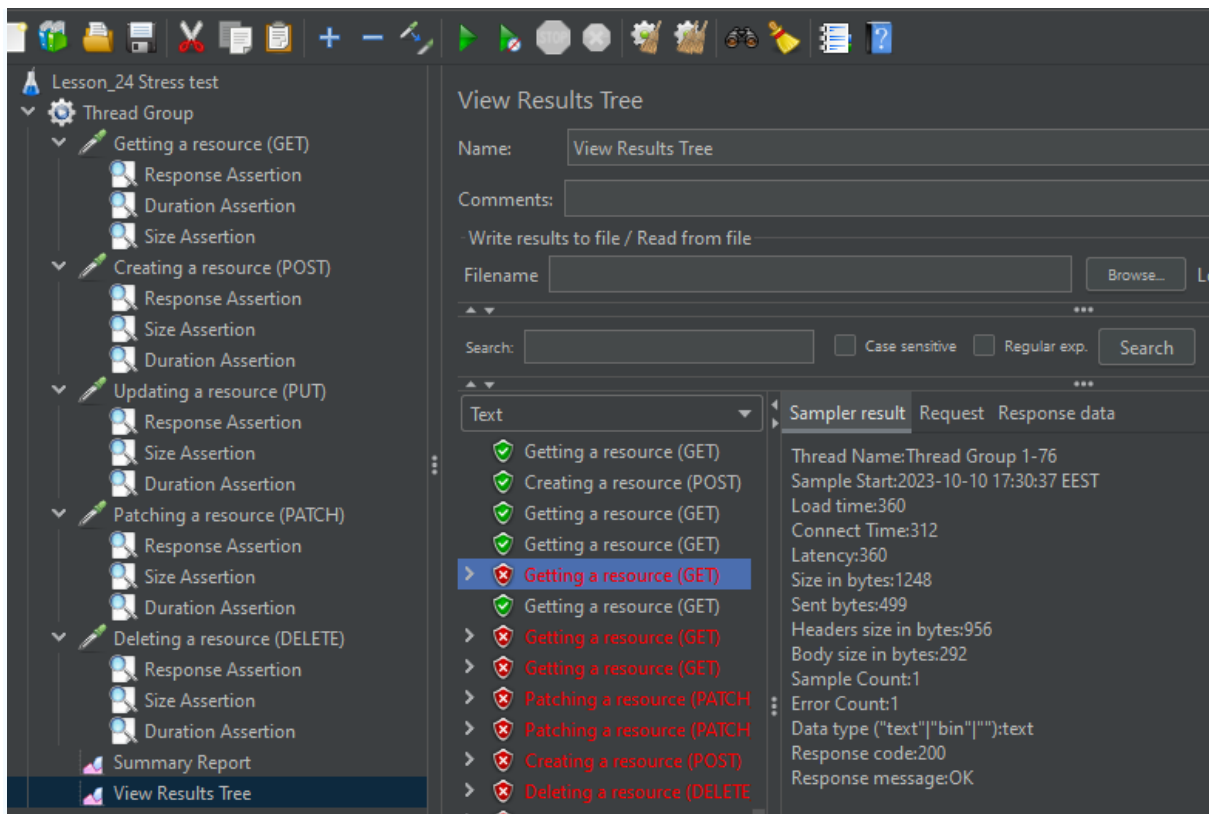
Apply to:
☐ Main sample and sub-samples ☒ Main sample only ☐ Sub-samples only

Duration to Assert

Duration in milliseconds: 200



b) при зміні кількості users на 100, вебсервіс не витримав навантаження;



3. Створений тест-план додай у свій репозиторій в GitHub.

```
MINGW64:/c/Users/User/PatOlena1103
73da80f..431f1fc  main -> main

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Lesson_24 Stress test.jmx

nothing added to commit but untracked files present (use "git add" to track)

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git add .
warning: in the working copy of 'Lesson_24 Stress test.jmx', LF will be replaced by CRLF t
he next time Git touches it

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git commit -m "Add new file"
[main 7a5a618] Add new file
 1 file changed, 392 insertions(+)
 create mode 100644 Lesson_24 Stress test.jmx

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 2.44 KiB | 1.22 MiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/OlenaUkrain/PatOlena1103.git
 431f1fc..7a5a618  main -> main

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$
```

<https://github.com/OlenaUkrain/PatOlena1103.git>

4. Створи команду для запуску вказаного тест-плану через Bash CLI. Запусти її та завантаж результати в Summary Report.

5. Створи документ зі скриншотом виконання команди в командному рядку та скриншотом Summary Report.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.3448]
(c) Корпорація Майкрософт. Усі права захищені.

C:\Users\User\Downloads\apache-jmeter-5.6.2\apache-jmeter-5.6.2\bin> -n -t "C:\Users\User\Downloads\apache-jmeter-5.6.2\
apache-jmeter-5.6.2\bin\Lesson_24 Stress test1.jmx" -l "C:\Users\User\Downloads\apache-jmeter-5.6.2\apache-jmeter-5.6.2\
bin\Test.csv"
'-n' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\User\Downloads\apache-jmeter-5.6.2\apache-jmeter-5.6.2\bin>jmeter -n -t "C:\Users\User\Downloads\apache-jmeter-
5.6.2\apache-jmeter-5.6.2\bin\Lesson_24 Stress test1.jmx" -l "C:\Users\User\Downloads\apache-jmeter-5.6.2\apache-jmeter-
5.6.2\bin\Test.csv"
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future r
elease
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future r
elease
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future r
elease
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future r
elease
Creating summariser <summary>
Created the tree successfully using C:\Users\User\Downloads\apache-jmeter-5.6.2\apache-jmeter-5.6.2\bin\Lesson_24 Stress
test1.jmx
Starting standalone test @ October 10, 2023 8:00:00 PM EEST (169695720427)
Waiting for possible Shutdown/StopTestNow/HeapDump/ThreadDump message on port 4445
summary = 1500 in 00:00:13 = 113.4/s Avg: 637 Min: 231 Max: 5460 Err: 1138 (75.87%)
Tidying up ... @ October 10, 2023 8:00:14 PM EEST (1696957214960)
... end of run

C:\Users\User\Downloads\apache-jmeter-5.6.2\apache-jmeter-5.6.2\bin>
```

6. Документ додай у відповідний репозиторій в GitHub.

```
MINGW64:/c/Users/User/PatOlena1103
User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
       Test.csv

nothing added to commit but untracked files present (use "git add" to track)

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git add .

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git commit -m "Add new file"
[main d9b871c] Add new file
 1 file changed, 1500 insertions(+)
 create mode 100644 Test.csv

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 27.69 KiB | 2.77 MiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/OlenaUkrain/PatOlena1103.git
   7a5a618..d9b871c  main -> main

User@DESKTOP-3HJBK20 MINGW64 ~/PatOlena1103 (main)
$ |
```

<https://github.com/OlenaUkrain/PatOlena1103.git>