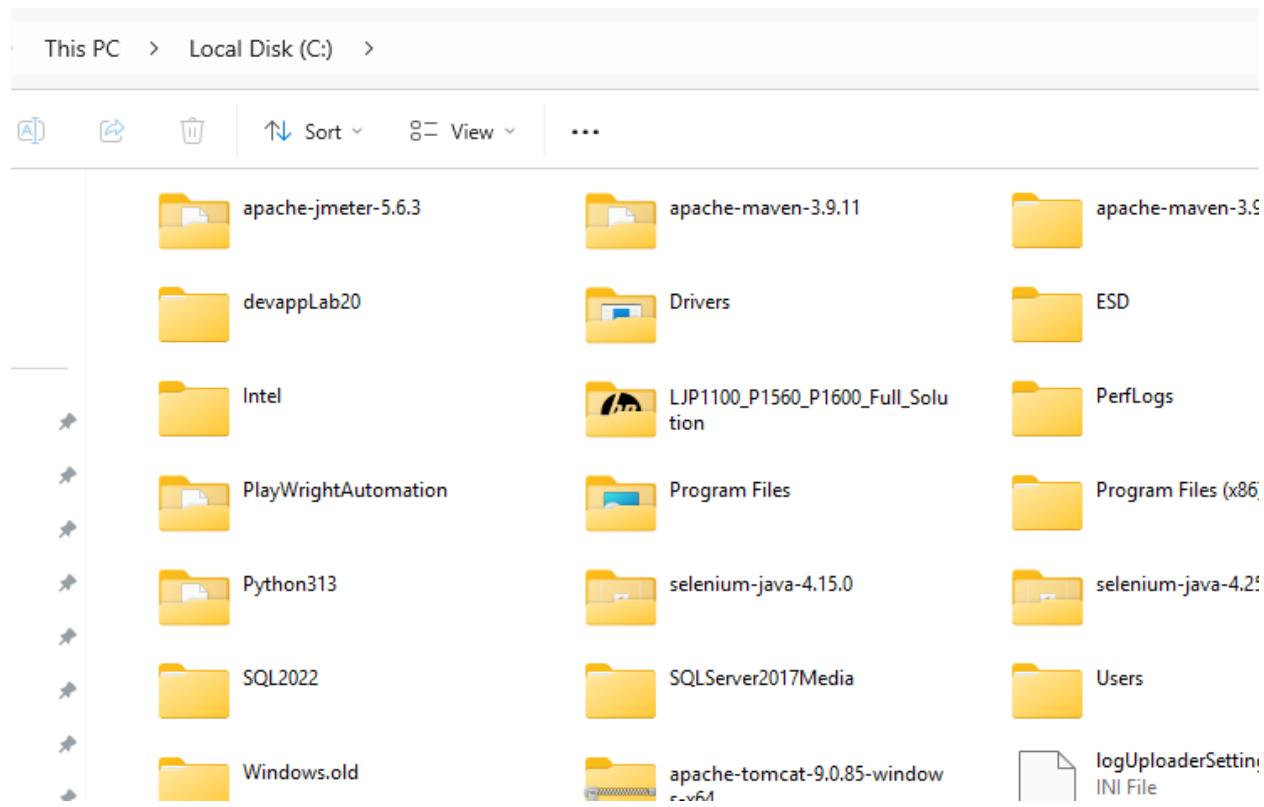


Final Report:

Section 1:

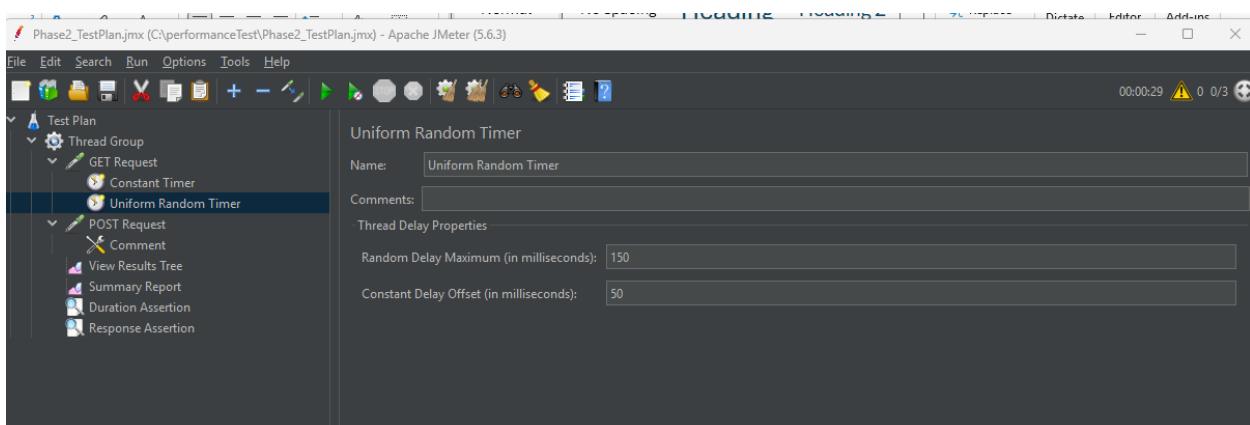
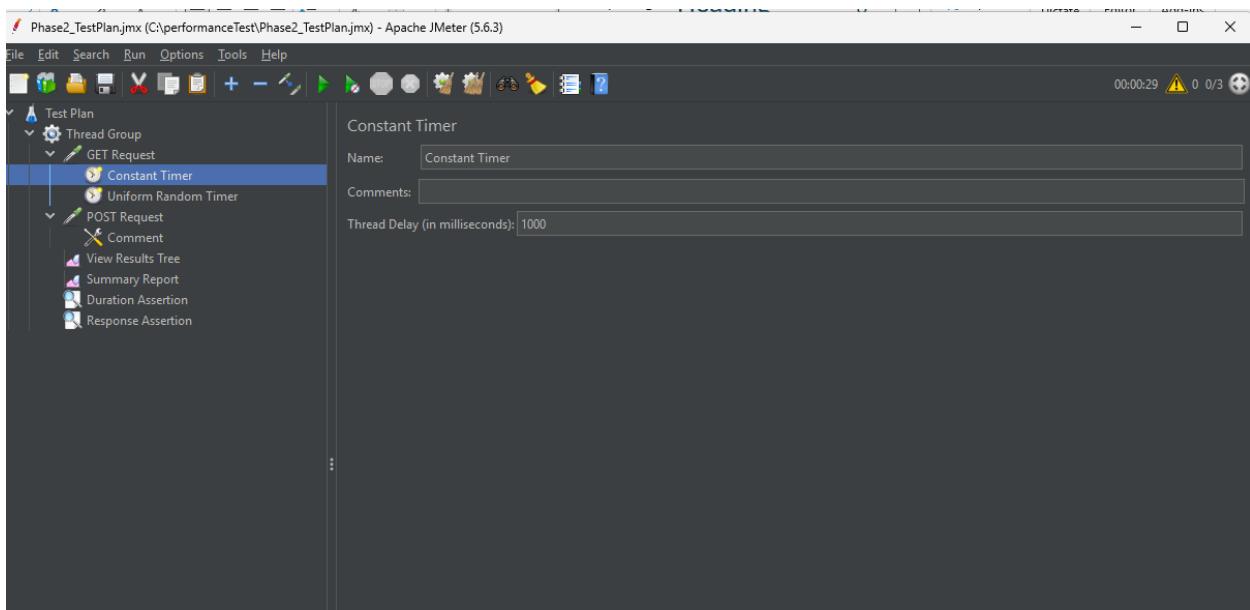
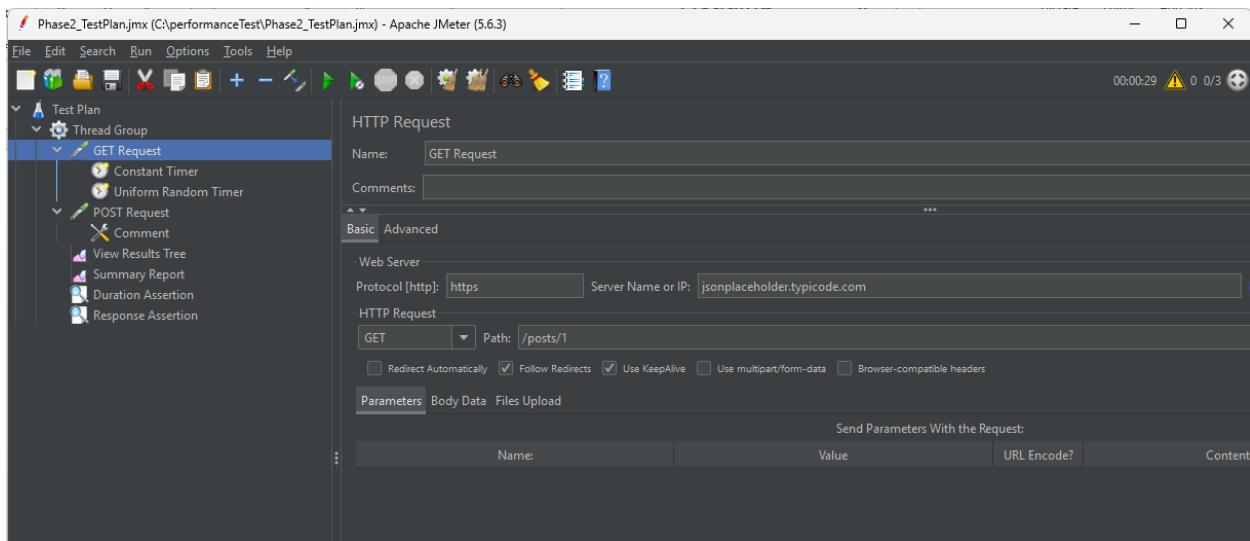


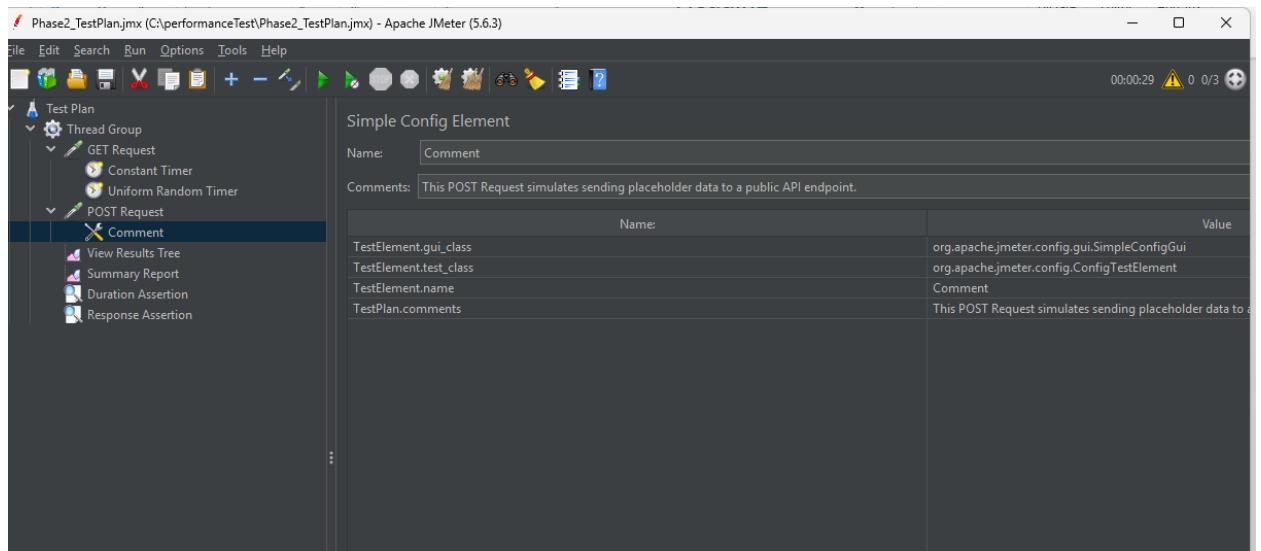
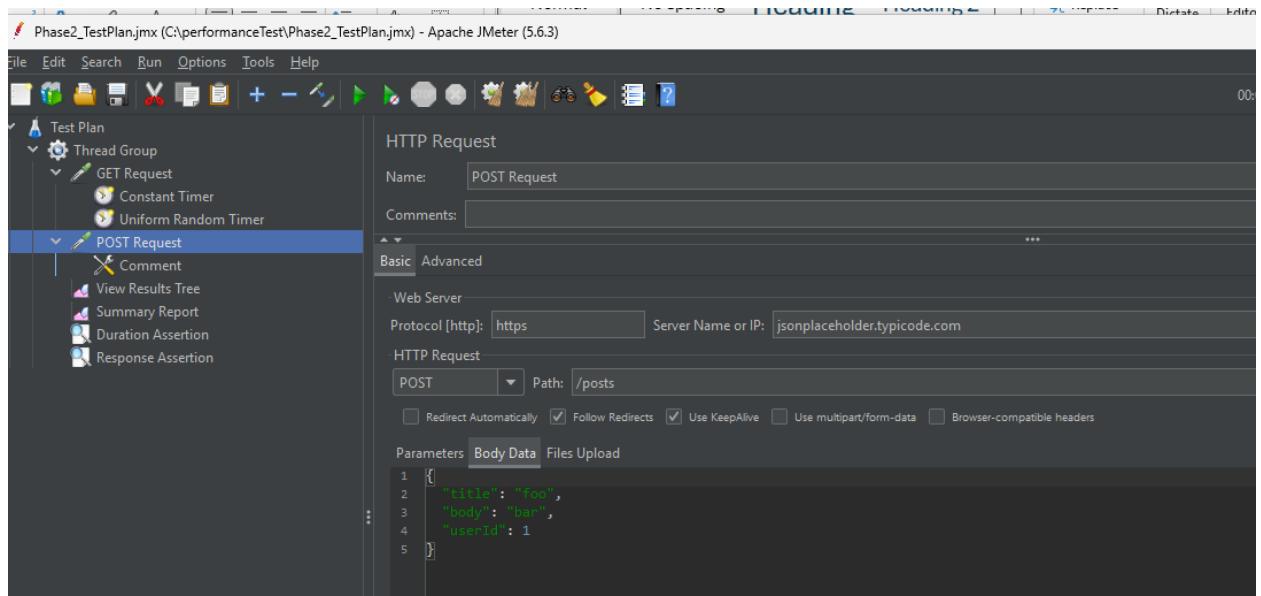
File Explorer view showing the contents of the Apache JMeter 5.6.3 bin directory:

Name	Date modified	Type	Size
examples	2025-09-16 5:03 PM	File folder	
report-template	2025-09-16 5:03 PM	File folder	
templates	2025-09-16 5:03 PM	File folder	
ApacheJMeter	2025-09-16 5:03 PM	Executable Jar File	14 KB
BeanShellAssertion.bshrc	2025-09-16 5:03 PM	BSHRC File	2 KB
BeanShellFunction.bshrc	2025-09-16 5:03 PM	BSHRC File	3 KB
BeanShellListeners.bshrc	2025-09-16 5:03 PM	BSHRC File	2 KB
BeanShellSampler.bshrc	2025-09-16 5:03 PM	BSHRC File	3 KB
create-rmi-keystore	2025-09-16 5:03 PM	Windows Batch File	2 KB
create-rmi-keystore.sh	2025-09-16 5:03 PM	sh_auto_file	2 KB
hc.parameters	2025-09-16 5:03 PM	PARAMETERS File	2 KB
headdump	2025-09-16 5:03 PM	Windows Comma...	2 KB
headdump.sh	2025-09-16 5:03 PM	sh_auto_file	1 KB
jaas.conf	2025-09-16 5:03 PM	CONF File	2 KB
jmeter	2025-09-16 5:03 PM	File	9 KB
jmeter	2025-09-16 5:03 PM	Windows Batch File	9 KB
jmeter.log	2025-10-01 5:12 PM	LOG File	2 KB
jmeter	2025-09-16 5:03 PM	Properties Source ...	58 KB
jmeter.sh	2025-09-16 5:03 PM	sh_auto_file	5 KB
jmeter-n	2025-09-16 5:03 PM	Windows Comma...	2 KB
jmeter-n-r	2025-09-16 5:03 PM	Windows Comma...	2 KB
jmeter-server	2025-09-16 5:03 PM	File	2 KB
jmeter-server	2025-09-16 5:03 PM	Windows Batch File	3 KB
jmeter-t	2025-09-16 5:03 PM	Windows Comma...	2 KB
jmeterw	2025-09-16 5:03 PM	Windows Comma...	1 KB
krb5.conf	2025-09-16 5:03 PM	CONF File	2 KB
lsm4d2.vml	2025-09-16 5:03 PM	VML File	5 KB

JMeter Test Plan configuration for "Phase2_TestPlan.jmx":

- Test Plan Structure:**
 - Thread Group (1 thread, 3 users, infinite loops, 30s duration)
 - GET Request (with Constant Timer and Uniform Random Timer)
 - POST Request (with Comment, View Results Tree, Summary Report, Duration Assertion, Response Assertion)
- Thread Group Properties:**
 - Name: Thread Group
 - Action after Sampler error: Continue
 - Number of Threads (users): 3
 - Ramp-up period (seconds): 3
 - Loop Count: Infinite
 - Same user on each iteration: checked
 - Delay Thread creation until needed: unchecked
 - Specify Thread lifetime: checked
 - Duration (seconds): 30
 - Startup delay (seconds): 0





Phase2_TestPlan.jmx (C:\performanceTest\Phase2_TestPlan.jmx) - Apache JMeter (5.6.3)

File Edit Search Run Options Tools Help

Test Plan

- Thread Group
 - GET Request
 - Constant Timer
 - Uniform Random Timer
- POST Request
 - Comment
 - View Results Tree
- Summary Report
- Duration Assertion
- Response Assertion

View Results Tree

Name: View Results Tree

Comments:

Write results to file / Read from file

Filename:

Search: Case sensitive Regular exp. Search Reset

Text

Sampler result Request Response data

Thread Name: Thread Group 1-1
Sample Start: 2025-10-02 19:28:09 PDT
Load time: 93
Connect Time: 0
Latency: 93
Size in bytes: 1336
Sent bytes: 253
Headers size in bytes: 1321
Body size in bytes: 15
Sample Count: 1
Error Count: 0
Data type ("text"|"bin"|""): text
Response code: 201
Response message: Created

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

Phase2_TestPlan.jmx (C:\performanceTest\Phase2_TestPlan.jmx) - Apache JMeter (5.6.3)

File Edit Search Run Options Tools Help

Test Plan

- Thread Group
 - GET Request
 - Constant Timer
 - Uniform Random Timer
- POST Request
 - Comment
 - View Results Tree
- Summary Report
- Duration Assertion
- Response Assertion

Summary Report

Name: Summary Report

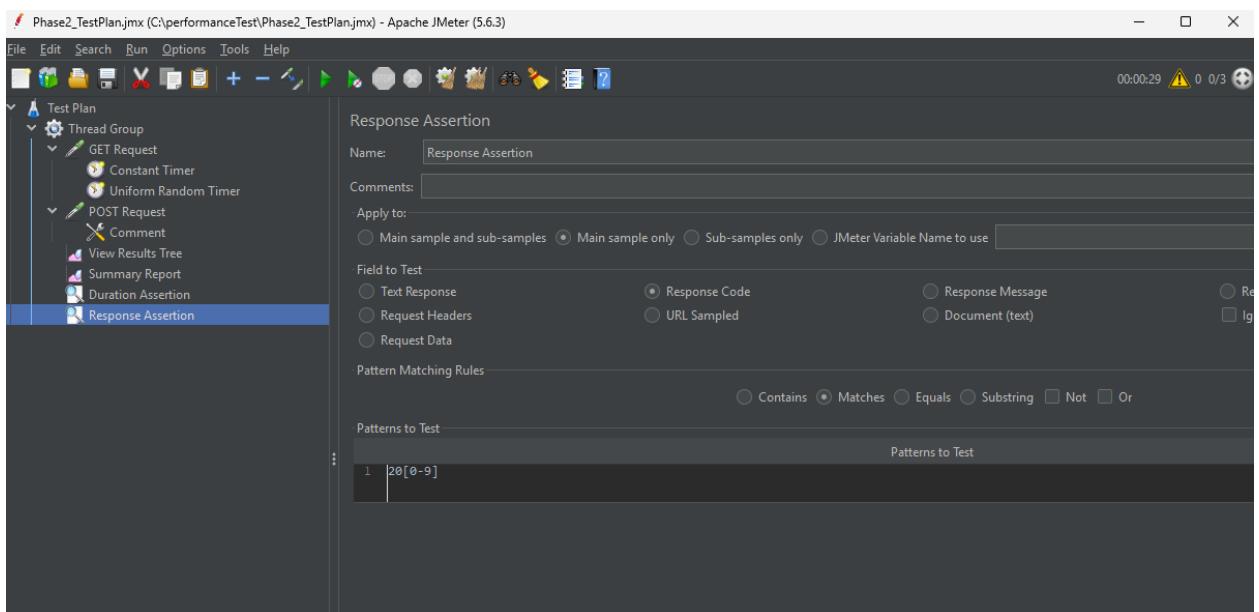
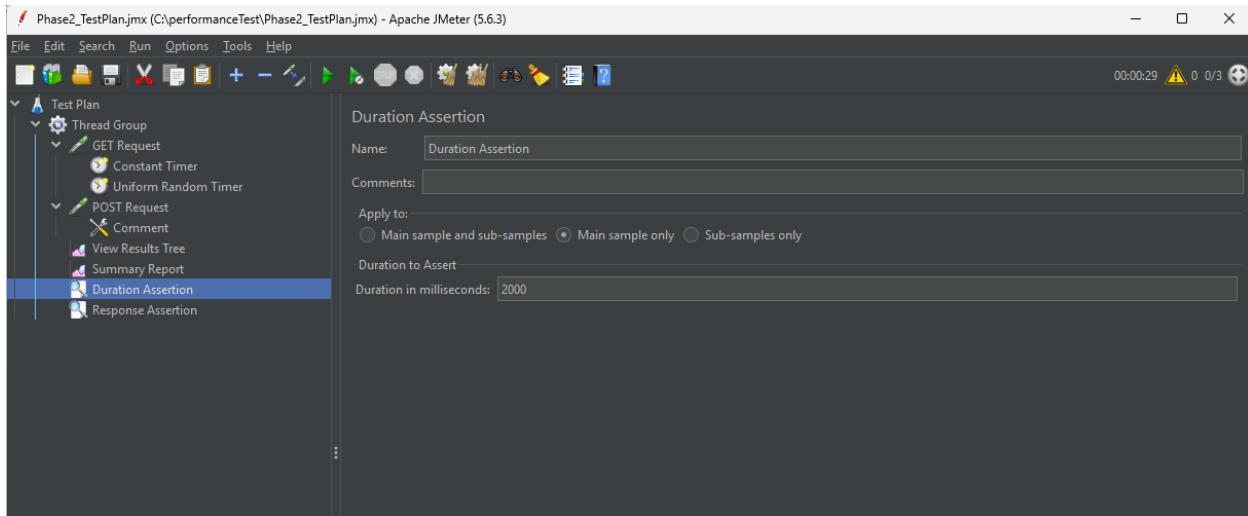
Comments:

Write results to file / Read from file

Filename:

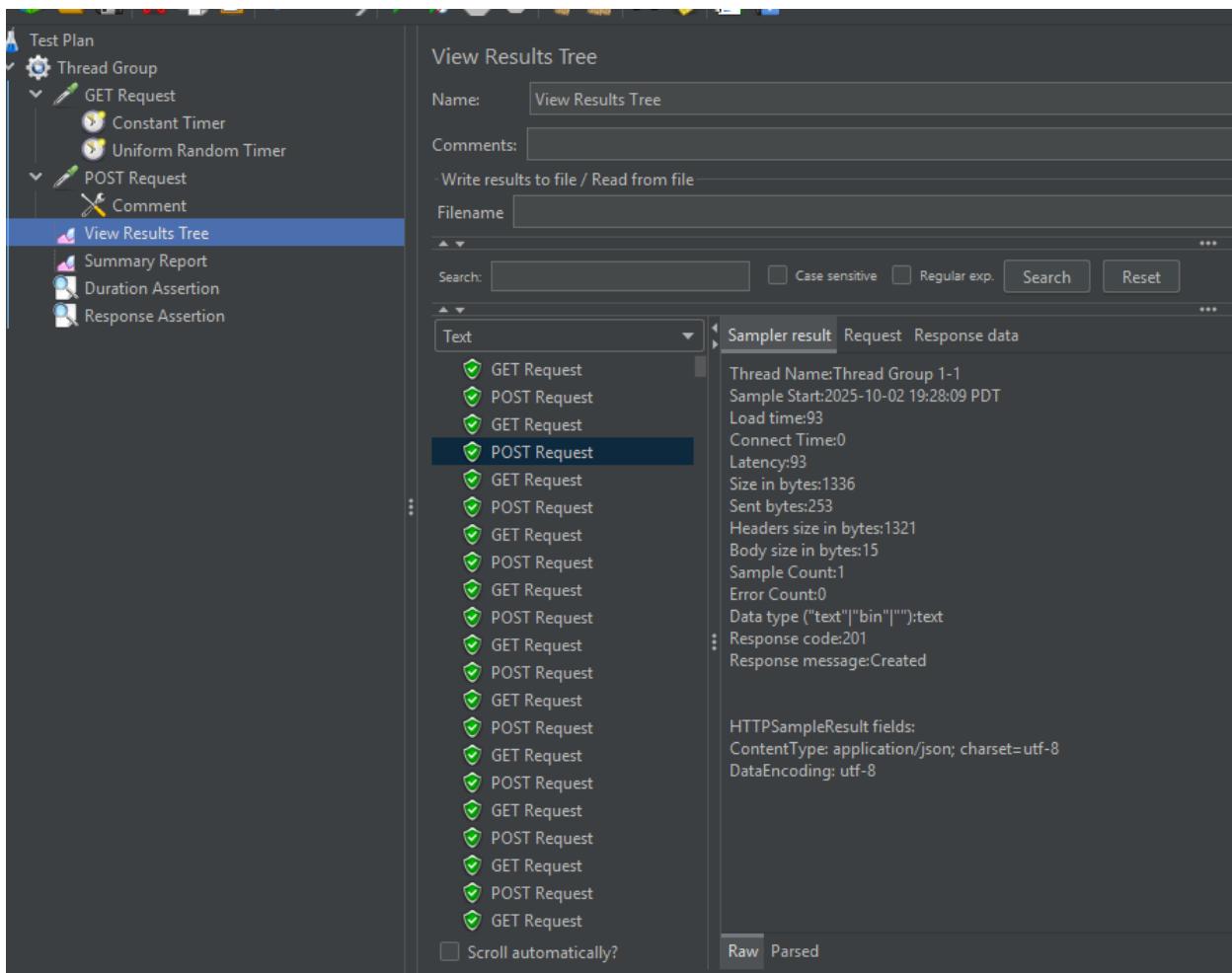
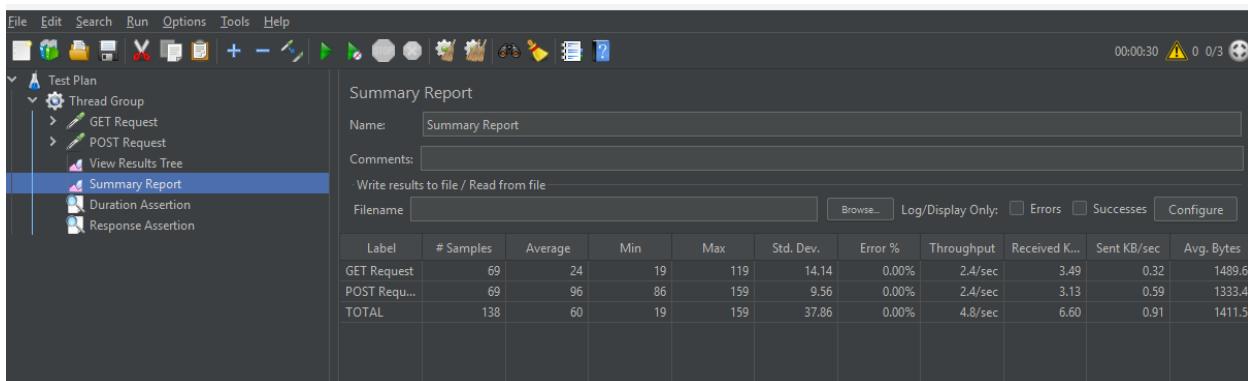
Log/Display Only: Errors Successes Configure

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received K..	Sent KB/sec	Avg. Bytes
GET Request	344	51	12	351	57.53	20.06%	4.3/min	0.18	0.01	2562.5
POST Requ...	344	105	77	197	35.61	20.06%	4.3/min	0.18	0.02	2539.0
TOTAL	688	78	12	351	54.97	20.06%	8.6/min	0.36	0.03	2550.7



Section: 2

ScreenShot of Summary Report:



Section 3: Validation & Analysis:

Duration Assertion is a powerful validation element used to enforce a specific performance requirement: that the server must respond within a predefined time limit.

- **Application:** The Duration Assertion was placed directly under the Thread Group, applying the limit to both the GET and POST samplers.
- **Configuration:** The duration was set to **2000 milliseconds (2 seconds)**.
- **Purpose:** This configuration required the server to complete each GET and POST transaction and return a response code within two seconds. If the response time (Load Time) of any sampler exceeded 2000ms, the assertion would fail, indicating a critical performance bottleneck. The successful test run confirms that the API performed well within this Service Level Agreement (SLA).

Response Assertion, which is the most common way to validate that a request was successfully processed by the server.

- **Function:** The Response Assertion was configured to inspect the **Response Code** field. This is critical because the response code is the most reliable indicator of the transaction outcome.
- **Validation Pattern:** The pattern used was the regular expression **20[0-9]**. This pattern tells JMeter to accept any HTTP status code that starts with

20, including **200, 201, 202**, etc..

- **Necessity:** This flexible pattern was necessary because the GET Request returns **200 OK** (successful retrieval), while the POST Request returns **201 Created** (successful resource creation). Checking for

20[0-9] ensured both successful transaction types would pass the assertion.

Results Analysis: Discuss observed HTTP Response Codes and their meaning (Topic 4)

The successful test run yielded two primary response codes, which are essential for understanding the API's behavior.

Sample	HTTP Code	HTTP Message	Meaning (Topic 4)
GET Request	200	OK	This is the standard response for a successful /posts/1. The client received the expected data in the response body.
POST Request	201	Created	This is the standard response for a successful POST request to a collection endpoint (/posts). It confirms that the server successfully processed the request body data and created a new resource as a result.

Export to Sheets

These results confirm that the API is functioning correctly for both read operations (GET) and write operations (POST). The

2xx family of status codes indicates **Success** and validates that all configured Samplers and the Response Assertion are working as intended.

The screenshot shows the JMeter interface with the 'View Results Tree' listener selected in the left sidebar under the 'Test Plan' tree. The main pane displays the results of a thread group containing a 'GET Request' and a 'POST Request'. The 'GET Request' is highlighted in blue. The results show 22 successful samples, with details like Thread Name, Sample Start time, Load time, Connect Time, Latency, Size in bytes, Sent bytes, Headers size in bytes, Body size in bytes, Sample Count, Error Count, Data type, Response code (200), and Response message (OK). The 'Parsed' tab is selected at the bottom.

TestPlasn_phase2.jmx (C:\Users\anune\OneDrive\TestPlasn_phase2.jmx) - Apache JMeter (5.6.3)

File Edit Search Run Options Tools Help

00:00:29 0/0 0/3

Test Plan

Thread Group

- GET Request
- POST Request
- View Results Tree
- Summary Report
- Duration Assertion
- Response Assertion

View Results Tree

Name: View Results Tree

Comments:

Write results to file / Read from file

Filename: Browse... Log/Display Only: Errors Successes Configure

Search: Case sensitive Regular exp: Search Reset

Text

Sampler result Request Response data

POST Request

Thread Name: Thread Group 1-3
Sample Start: 2025-10-02 21:30:26 PDT
Load time: 91
Connect Time: 0
Latency: 91
Size in bytes: 1333
Sent bytes: 253
Headers size in bytes: 1318
Body size in bytes: 15
Sample Count: 1
Error Count: 0
Data type ("text"|"bin"|""): text
Response code: 201
Response message: Created

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

Scroll automatically? Raw Parsed

