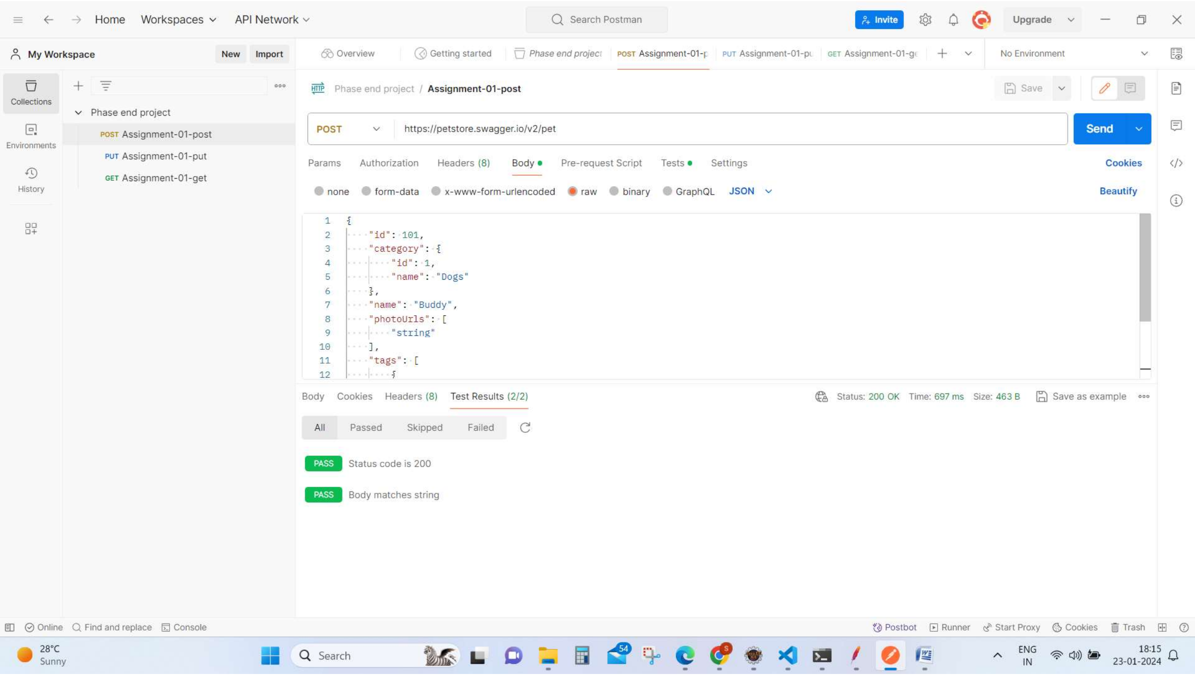
Non-Functional Testing Using Postman, REST Assured, and JMeter.

Source code:

- Open Postman
- Create a new collection called **end project** and arrange three end-to-end services as shown below:
  - In this blank collection add new request
  - **Take add request as post–Assignment-01-post**



Phase end project / Assignment-01-post

POST https://petstore.swagger.io/v2/pet

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
{
    "id": 101,
    "category": {
        "id": 1,
        "name": "Dogs"
    },
    "name": "Buddy",
    "photoUrls": [
        "string"
    ],
    "tags": [
        {
```

Body Cookies Headers (8) Test Results (2/2)

Status: 200 OK Time: 697 ms Size: 463 B Save as example

All Passed Skipped Failed

PASS Status code is 200

PASS Body matches string

In this request part add Assignment-01-Post url:https://petstore.swagger.io/v2/pet in body part select raw area and select text as json

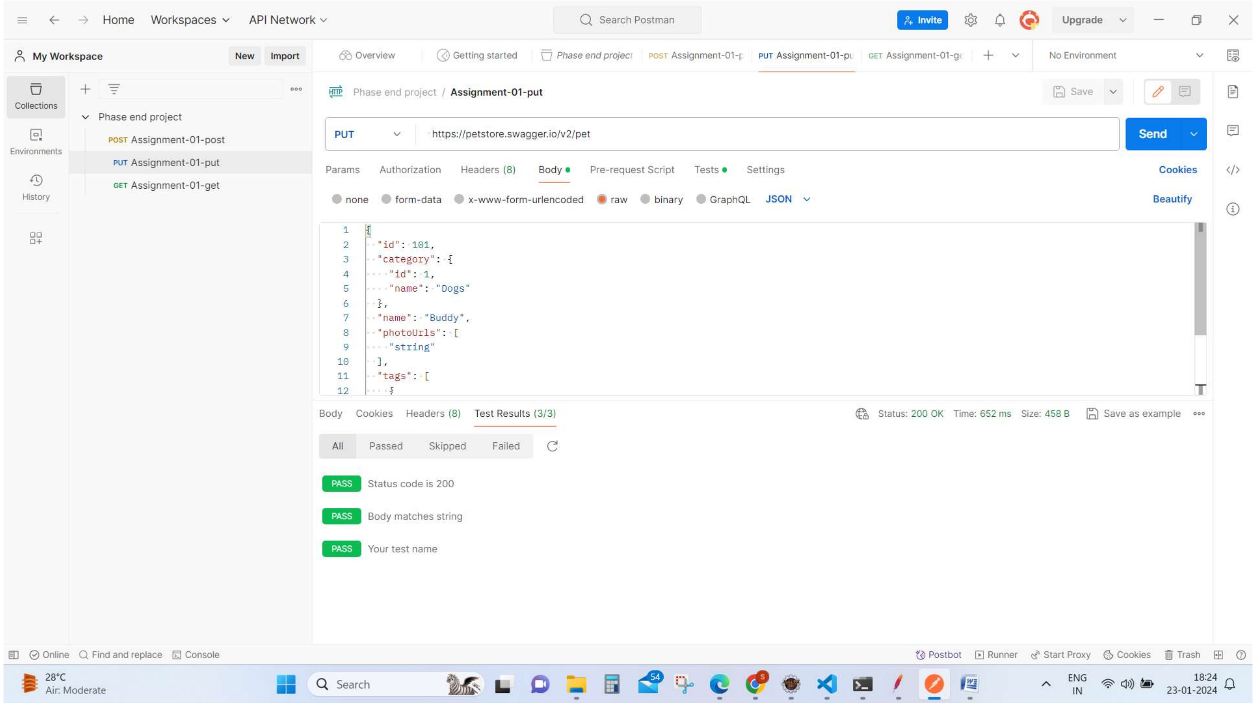
Body:

```
{
    "id": 101,
    "category": {
        "id": 1,
        "name": "Dogs"
    },
    "name": "Buddy",
    "photoUrls": [
        "string"
    ],
    "tags": [
        {
            "id": 0,
            "name": "string"
        }
    ],
    "status": "available"
}
```

Tests:

```
pm.test("Status code is 200", function () {
    pm.response.to.have.status(200);
});
pm.test("Body matches string", function () {
    pm.expect(pm.response.text()).to.include("available");
});
```

Next Take add request as put–Assignment-01-put



Phase end project
- POST Assignment-01-post
- PUT Assignment-01-put
- GET Assignment-01-get

Phase end project / Assignment-01-put

PUT https://petstore.swagger.io/v2/pet

Params | Authorization | Headers (8) | Body ● | Pre-request Script | Tests ● | Settings

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
{
  "id": 101,
  "category": {
    "id": 1,
    "name": "Dogs"
  },
  "name": "Buddy",
  "photoUrls": [
    "string"
  ],
  "tags": [
    {
```

Body | Cookies | Headers (8) | Test Results (3/3)

Status: 200 OK Time: 652 ms Size: 458 B Save as example

All | Passed | Skipped | Failed

```
PASS Status code is 200
PASS Body matches string
PASS Your test name
```

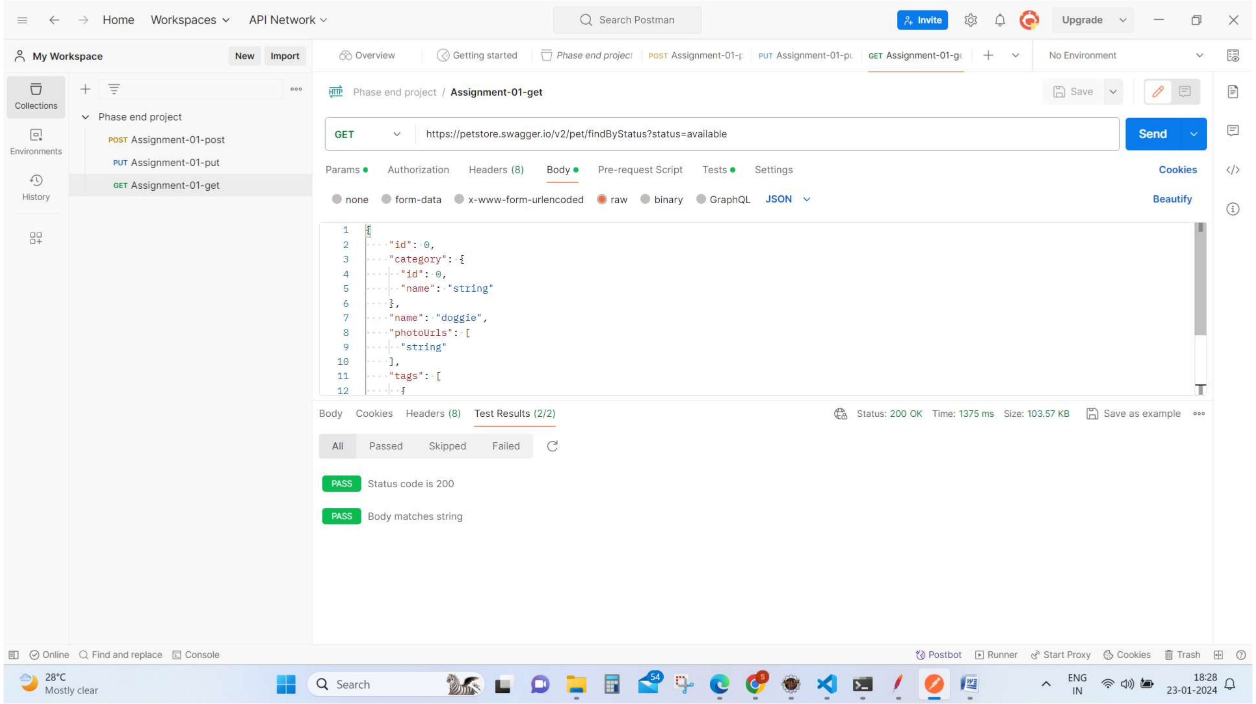
Body:

```
{
  "id": 101,
  "category": {
    "id": 1,
    "name": "Dogs"
  },
  "name": "Buddy",
  "photoUrls": [
    "string"
  ],
  "tags": [
    {
      "id": 0,
      "name": "string"
    }
  ],
  "status": "sold"
}
```

Tests:

```
pm.test("Status code is 200", function () {
 pm.response.to.have.status(200);
});
pm.test("Body matches string", function () {
 pm.expect(pm.response.text()).to.include("sold");
});
pm.test("Your test name", function () {
 var jsonData = pm.response.json();
 pm.expect(jsonData.id).to.eql(101);
});
```

Next select postman-assignment-01-get method



Phase end project / Assignment-01-get

GET https://petstore.swagger.io/v2/pet/findByStatus?status=available

```
{
    "id": 0,
    "category": {
        "id": 0,
        "name": "string"
    },
    "name": "doggie",
    "photoUrls": [
        "string"
    ],
    "tags": [
        {
```

Test Results (2/2)

Status: 200 OK Time: 1375 ms Size: 103.57 KB

PASS Status code is 200

PASS Body matches string

Body:

```
{
  "id": 0,
  "category": {
    "id": 0,
    "name": "string"
  },
  "name": "doggie",
  "photoUrls": [
    "string"
  ],
  "tags": [
    {
      "id": 0,
      "name": "string"
    }
  ],
   "status": "available"
  }
```

Tests:

```
pm.test("Status code is 200", function () {
 pm.response.to.have.status(200);
});
pm.test("Body matches string", function () {
 pm.expect(pm.response.text()).to.include("available");
});
```

Next Take Rest Assured Assignments:

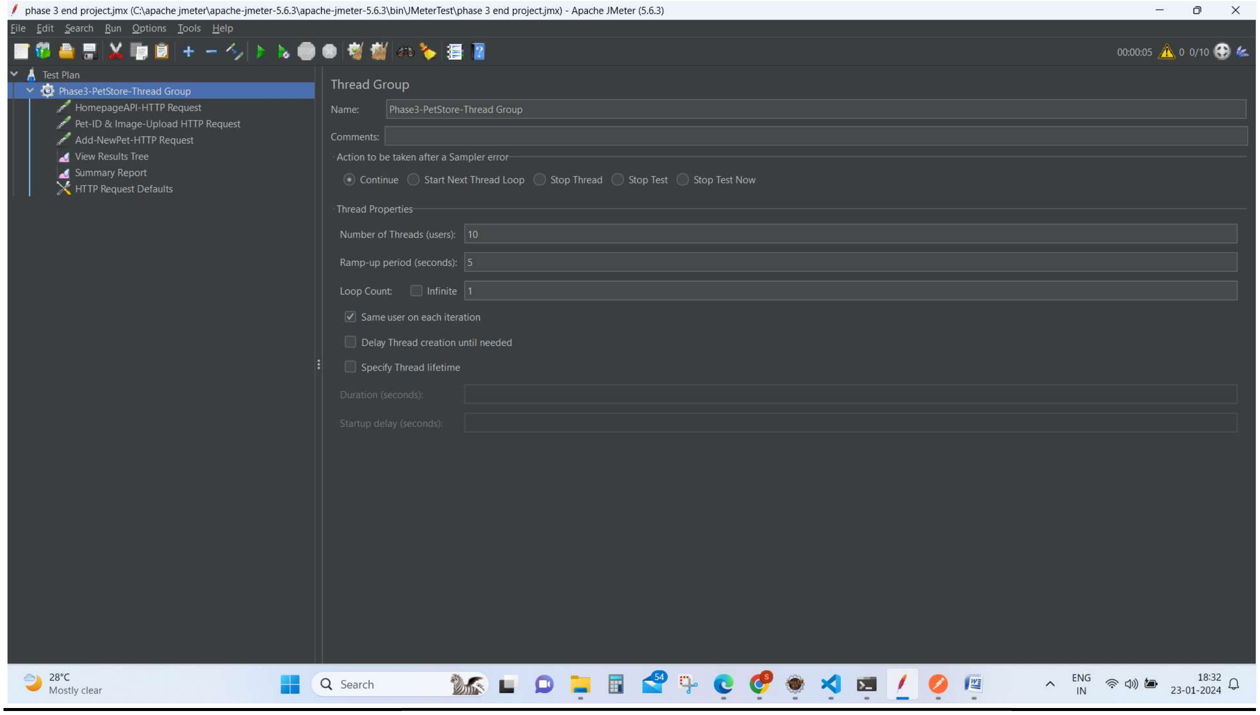
Go to eclipse part create a project rest assured scripts

Enter package name phase end project take class name PetStoreAPITest package

```
courseEndProject;

importorg.testng.annotations.Test;
importio.restassured.RestAssured;
importstaticio.restassured.RestAssured.given;
importstaticorg.hamcrest.Matchers.*;


publicclassPetStoreAPITest{

//      @Test
//      publicvoidtestGetPetById(){
//              RestAssured.baseURI="https://petstore.swagger.io/v2";
//
//              given()
//                      .pathParam("petId",0)
//              .when()
//                      .get("/pet/{petId}")
//              .then()
//                      .statusCode(200)
//                      .body("id",equalTo(0))
//                      .body("name",equalTo("Fido"))
//                      .body("status",equalTo("available"));
//      }

        @Test
```

```
    publicvoidtestAddNewPet(){
        RestAssured.baseURI="https://petstore.swagger.io/v2";

        given()
            .header("Content-Type","application/json")
            .body("{\"id\":101,\"category\":{\"id\":1,\"name\":\"Dogs\"},
\"name\":\"Buddy\",\"photoUrls\":[\"string\"],\"tags\":[{\"id\":0,
\"name\":\"string\"}],\"status\":\"available\"}")
        .when()
            .post("/pet")
        .then()
            .statusCode(200)
            .body("name",equalTo("Buddy"))
            .body("status",equalTo("available"));
    }

    @Test

    publicvoidtestUpdatePetStatus(){
        RestAssured.baseURI="https://petstore.swagger.io/v2";

        given()
            .header("Content-Type","application/json")
            .body("{\"id\":101,\"status\":\"sold\"}")
        .when()
            .put("/pet")
        .then()
            .statusCode(200)
            .body("status",equalTo("sold"));
    }
}
```

Jmeter Framework



phase 3 end project.jmx (C:\apache jmeter\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\JMeterTest\phase 3 end project.jmx) - Apache JMeter (5.6.3)

- Test Plan
  - Phase3-PetStore-Thread Group
    - HomepageAPI-HTTP Request
    - Pet-ID & Image-Upload HTTP Request
    - Add-NewPet-HTTP Request
    - View Results Tree
    - Summary Report
    - HTTP Request Defaults

Thread Group

Name: Phase3-PetStore-Thread Group

Comments:

Action to be taken after a Sampler error

● Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 10

Ramp-up period (seconds): 5

Loop Count: □ Infinite 1

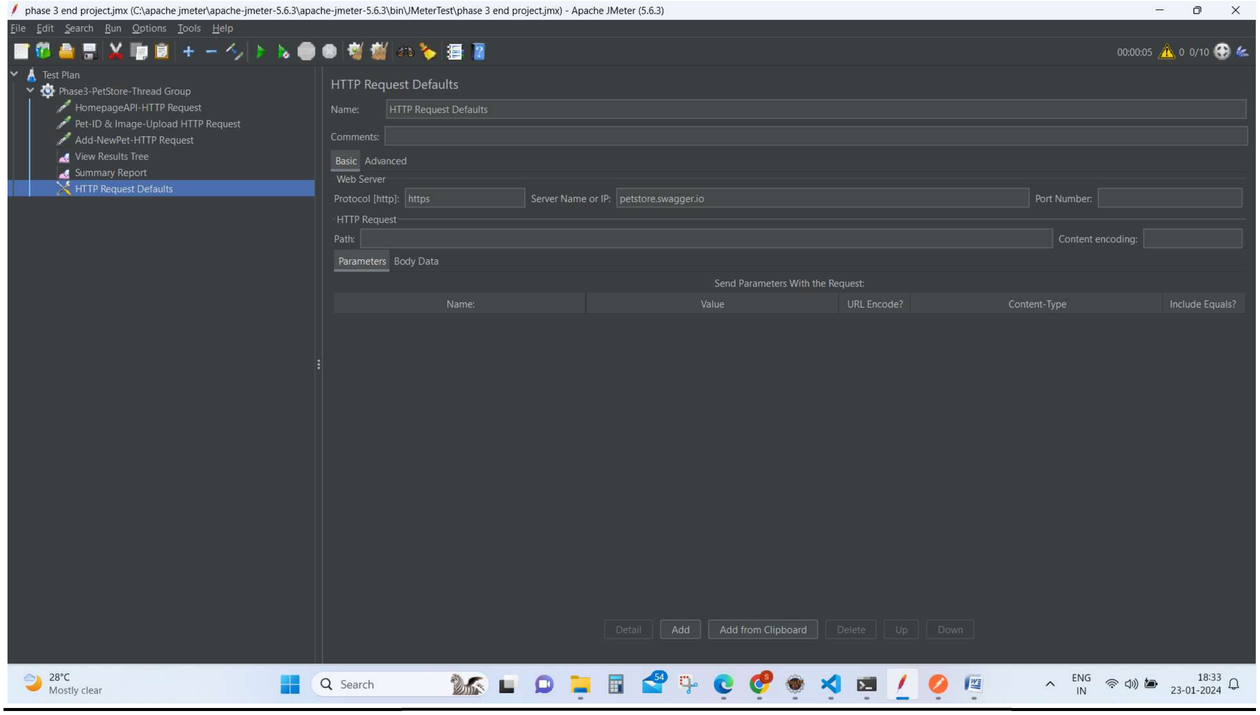
☑ Same user on each iteration

□ Delay Thread creation until needed

□ Specify Thread lifetime

Duration (seconds):

Startup delay (seconds):



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HTTP Request Defaults

Name: HTTP Request Defaults

Comments:

Basic Advanced

Web Server

Protocol [http]: https Server Name or IP: petstore.swagger.io Port Number:

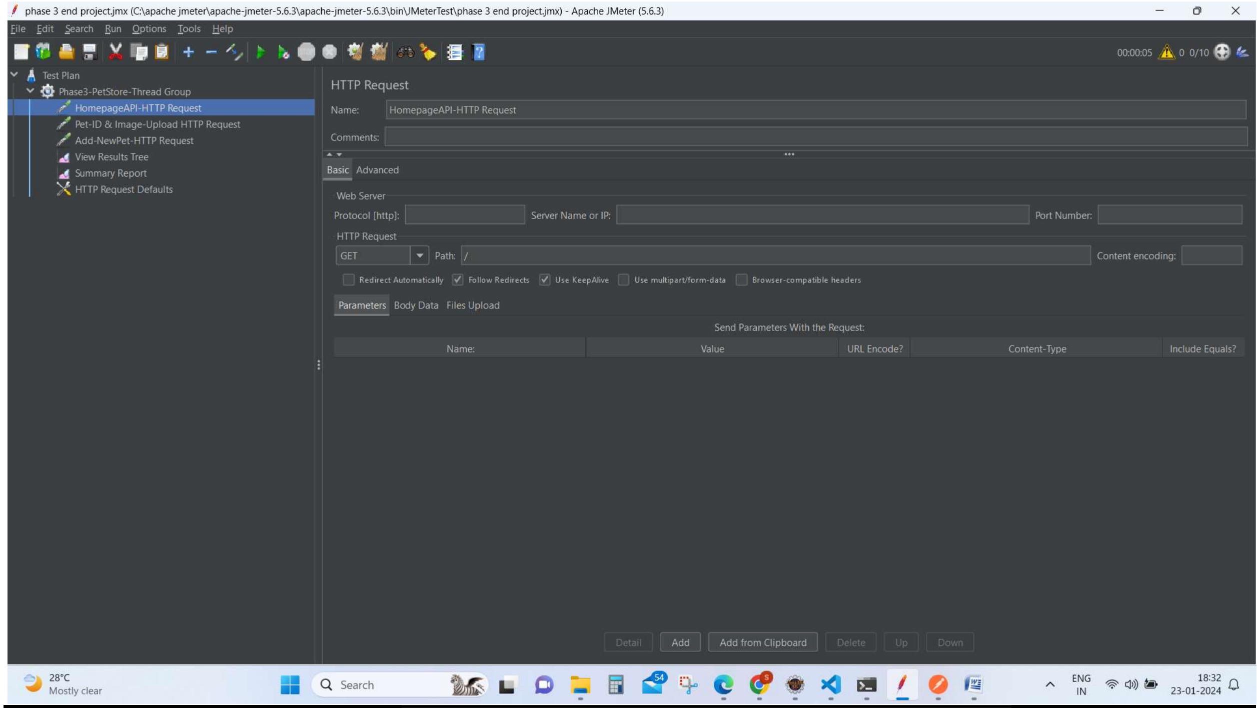
HTTP Request

Path: Content encoding:

Parameters Body Data

Send Parameters With the Request:

Name:	Value	URL Encode?	Content-Type	Include Equals?



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HTTP Request

Name: HomepageAPI-HTTP Request

Comments:

Web Server

Protocol [http]: Server Name or IP: Port Number:

HTTP Request

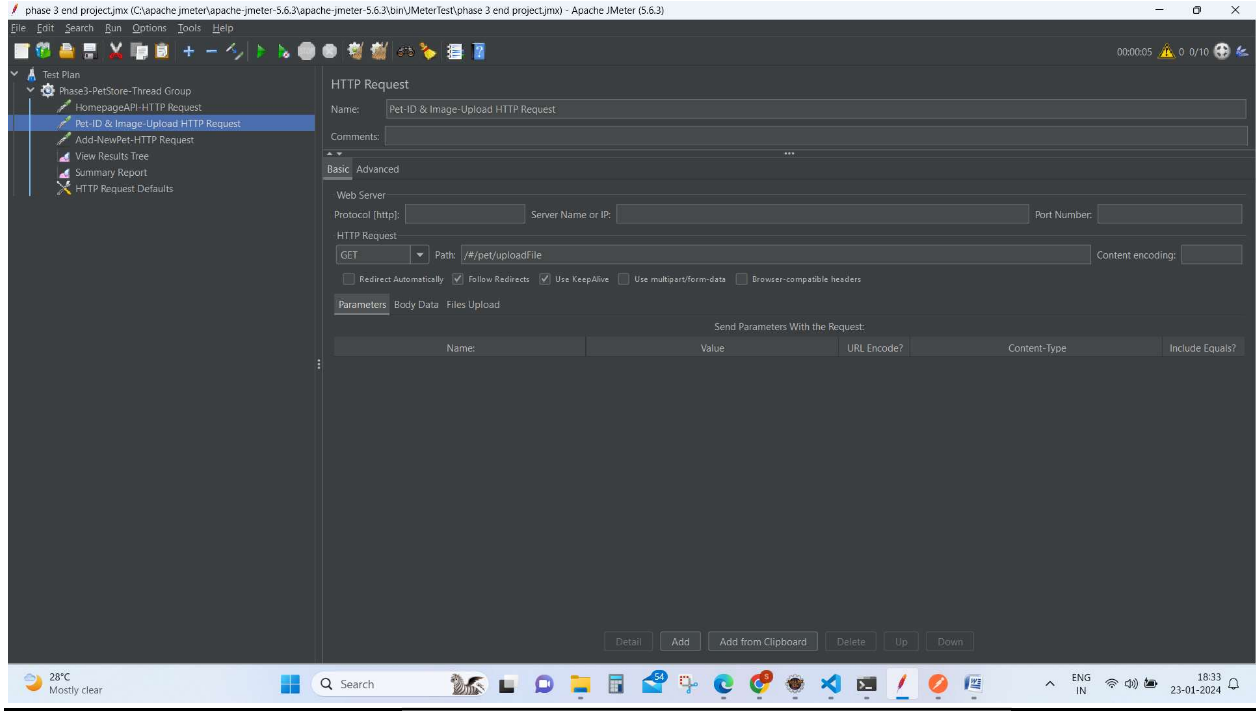
GET Path: / Content encoding:

□ Redirect Automatically ☑ Follow Redirects ☑ Use KeepAlive □ Use multipart/form-data □ Browser-compatible headers

Send Parameters With the Request:

Name:	Value	URL Encode?	Content-Type	Include Equals?

Detail Add Add from Clipboard Delete Up Down
28°C
Mostly clear
Search
ENG
IN
18:32
23-01-2024



phase 3 end project.jmx (C:\apache jmeter\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\JMeterTest\phase 3 end project.jmx) - Apache JMeter (5.6.3)

File Edit Search Run Options Tools Help
00:00:05 0 0/10

- Test Plan
  - Phase3-PetStore-Thread Group
    - HomepageAPI-HTTP Request
    - Pet-ID & Image-Upload HTTP Request
    - Add-NewPet-HTTP Request
    - View Results Tree
    - Summary Report
    - HTTP Request Defaults

HTTP Request

Name: Pet-ID & Image-Upload HTTP Request

Comments:

Web Server

Protocol [http]: Server Name or IP: Port Number:

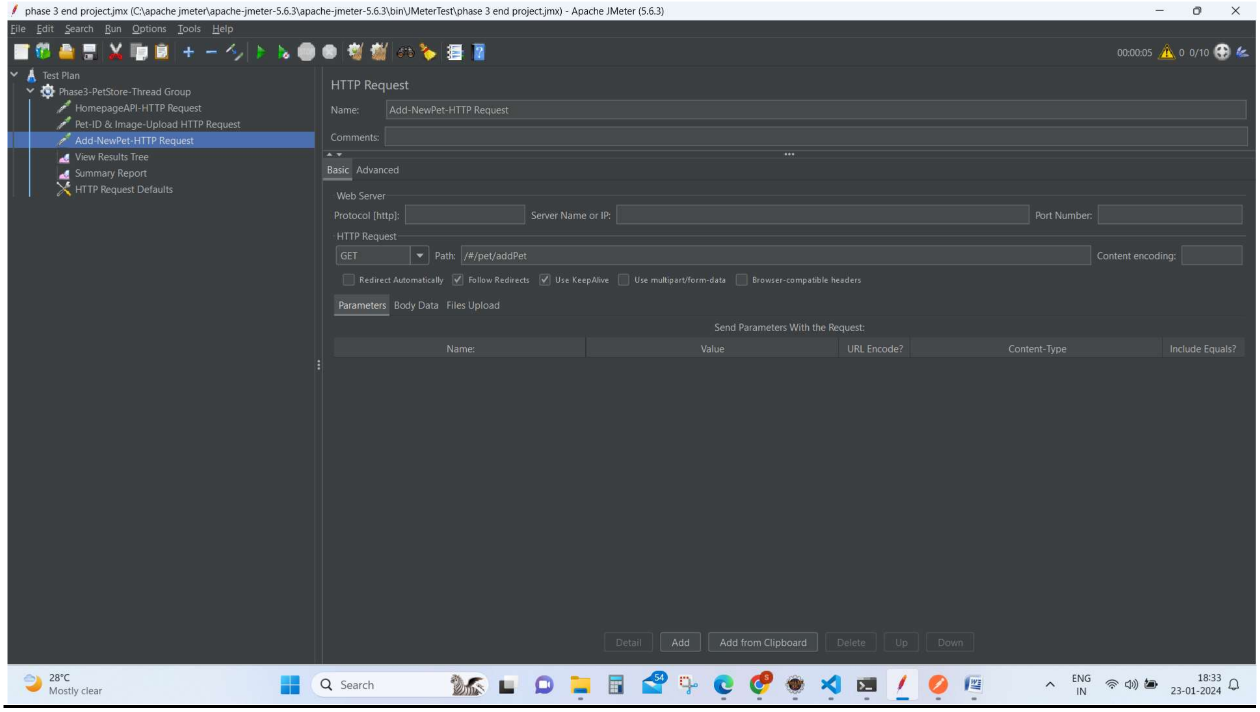
HTTP Request

GET Path: /#/pet/uploadFile Content encoding:

□ Redirect Automatically ☑ Follow Redirects ☑ Use KeepAlive □ Use multipart/form-data □ Browser-compatible headers

Send Parameters With the Request:

Name:	Value	URL Encode?	Content-Type	Include Equals?



phase 3 end project.jmx (C:\apache jmeter\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\JMeterTest\phase 3 end project.jmx) - Apache JMeter (5.6.3)

- Test Plan
  - Phase3-PetStore-Thread Group
    - HomepageAPI-HTTP Request
    - Pet-ID & Image-Upload HTTP Request
    - Add-NewPet-HTTP Request
    - View Results Tree
    - Summary Report
    - HTTP Request Defaults

HTTP Request

Name: Add-NewPet-HTTP Request

Comments:

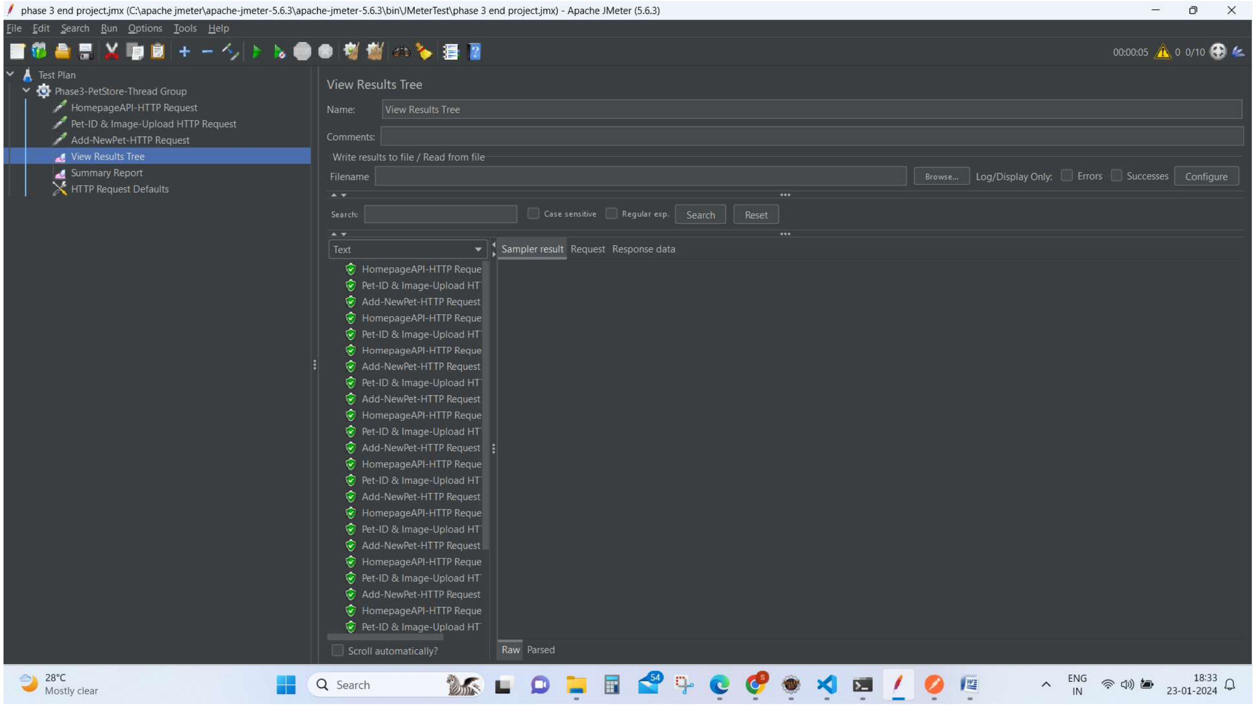
Web Server: Protocol [http]: Server Name or IP: Port Number:

HTTP Request: GET Path: /#/pet/addPet Content encoding:

☐ Redirect Automatically ☑ Follow Redirects ☑ Use KeepAlive ☐ Use multipart/form-data ☐ Browser-compatible headers

Send Parameters With the Request:

Name:	Value	URL Encode?	Content-Type	Include Equals?



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View Results Tree

Name: View Results Tree

Comments:

Write results to file / Read from file

Filename

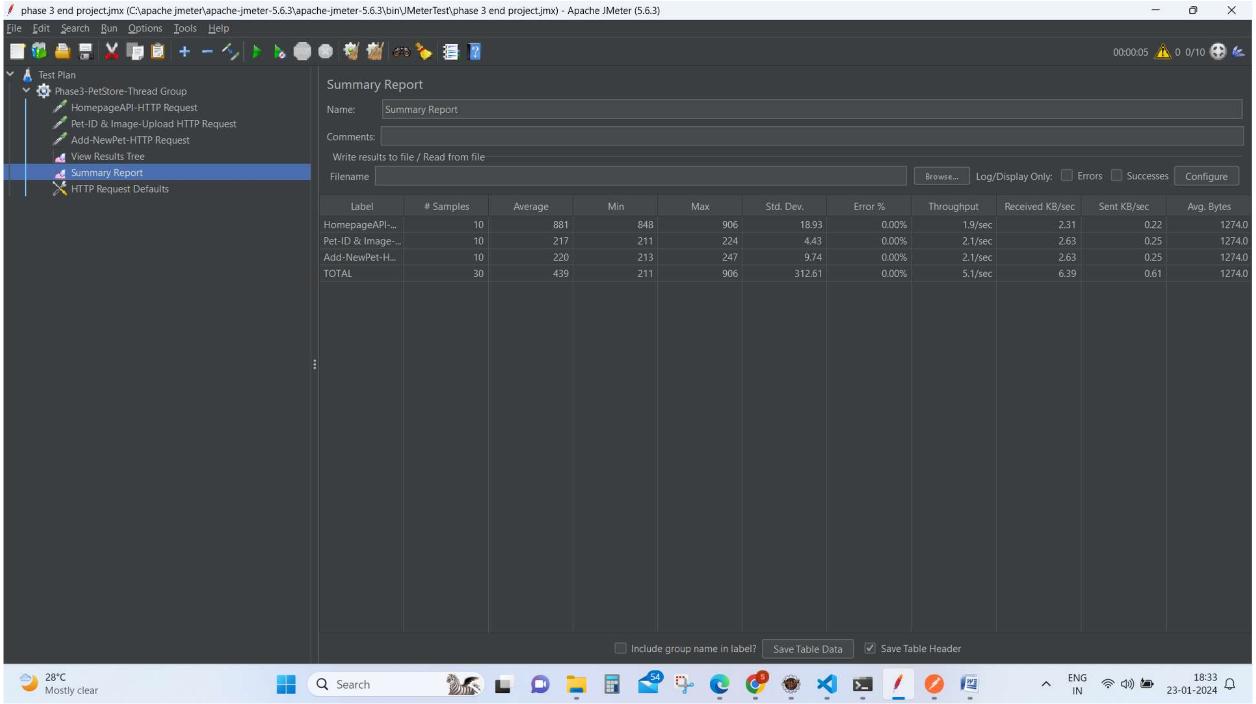
Log/Display Only: ☐ Errors ☐ Successes

Search: ☐ Case sensitive ☐ Regular exp.

Text

- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT
- Add-NewPet-HTTP Request
- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT
- HomepageAPI-HTTP Reque
- Add-NewPet-HTTP Request
- Pet-ID & Image-Upload HT
- Add-NewPet-HTTP Request
- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT
- Add-NewPet-HTTP Request
- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT
- Add-NewPet-HTTP Request
- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT
- Add-NewPet-HTTP Request
- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT
- Add-NewPet-HTTP Request
- HomepageAPI-HTTP Reque
- Pet-ID & Image-Upload HT

☐ Scroll automatically?



phase 3 end project.jmx (C:\apache jmeter\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\JMeterTest\phase 3 end project.jmx) - Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
00:00:05 0 0/10
Test Plan
Phase3-PetStore-Thread Group
HomepageAPI-HTTP Request
Pet-ID & Image-Upload HTTP Request
Add-NewPet-HTTP Request
View Results Tree
Summary Report
HTTP Request Defaults

Summary Report

Name: Summary Report

Comments:

Write results to file / Read from file

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

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
HomepageAPI-...	10	881	848	906	18.93	0.00%	1.9/sec	2.31	0.22	1274.0
Pet-ID & Image-...	10	217	211	224	4.43	0.00%	2.1/sec	2.63	0.25	1274.0
Add-NewPet-H...	10	220	213	247	9.74	0.00%	2.1/sec	2.63	0.25	1274.0
TOTAL	30	439	211	906	312.61	0.00%	5.1/sec	6.39	0.61	1274.0

□ Include group name in label? Save Table Data ☑ Save Table Header