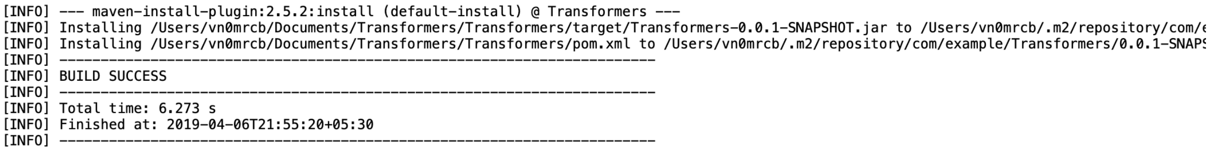
Project Usage Guide

Overview

- This project was developed using Spring Boot Rest API, Java 8 using Maven build tool.

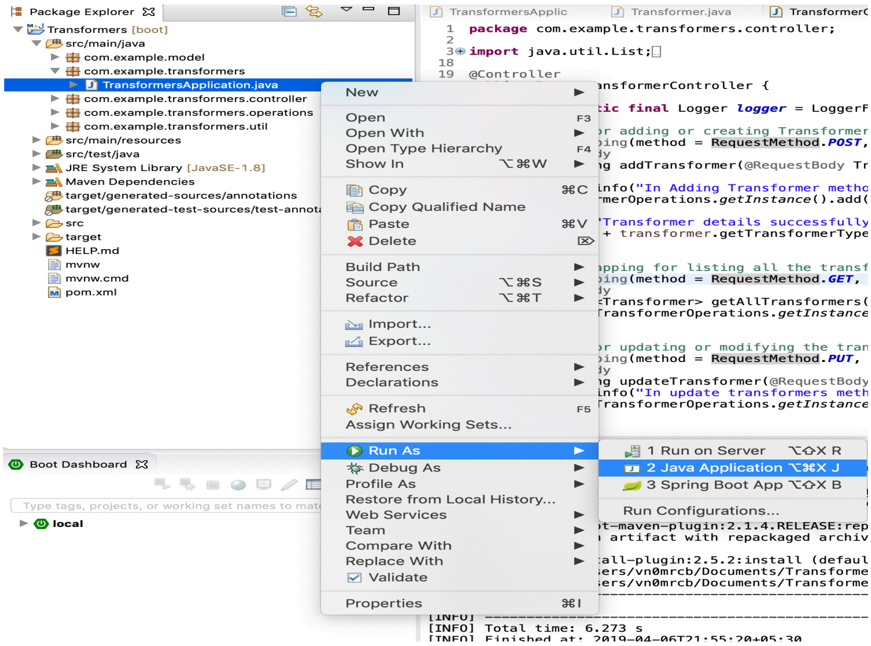
Steps to build and start the application

1. Import the provided source code in Eclipse STS as a Maven Project.
2. After importing the project, right click on the project and select:
   Run As -> Maven install
3. The build should be successful as shown below:



```
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ Transformers ---
[INFO] Installing /Users/vn0mrcb/Documents/Transformers/Transformers/target/Transformers-0.0.1-SNAPSHOT.jar to /Users/vn0mrcb/.m2/repository/com/e
[INFO] Installing /Users/vn0mrcb/Documents/Transformers/Transformers/pom.xml to /Users/vn0mrcb/.m2/repository/com/example/Transformers/0.0.1-SNAPS
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 6.273 s
[INFO] Finished at: 2019-04-06T21:55:20+05:30
[INFO] ------------------------------------------------------------------------
```

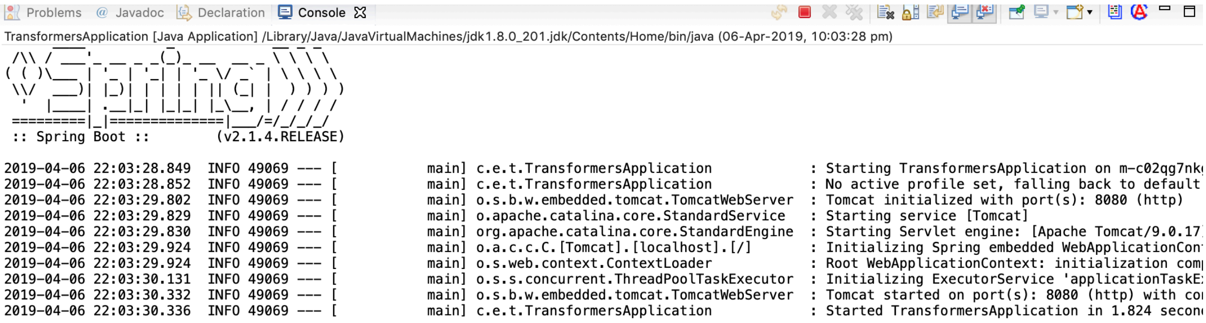
4. Next, right click on TransformersApplication ->Run As ->Java Application.



```
package com.example.transformers.controller;

import java.util.List;

@Controller
ansformerController {
tic final Logger logger = LoggerF
or adding or creating Transformer
ping(method = RequestMethod.POST,
dy
ng addTransformer(@RequestBody Tr
info("In Adding Transformer metho
rmerOperations.getInstance().add(
'Transformer details successfully
 + transformer.getTransformerType
apping for listing all the transf
ping(method = RequestMethod.GET,
dy
<Transformer> getAllTransformers(
TransformerOperations.getInstance
or updating or modifying the tran
ping(method = RequestMethod.PUT,
dy
ng updateTransformer(@RequestBody
info("In update transformers meth
TransformerOperations.getInstance
```

```
ot-maven-plugin:2.1.4.RELEASE:rep
 artifact with repackaged archiv
all-plugin:2.5.2:install (defaul
sers/vn0mrcb/Documents/Transforme
sers/vn0mrcb/Documents/Transforme
----------------------------------
[INFO] ---------------------------------------------
[INFO] Total time: 6.273 s
[INFO] Finished at: 2019-04-06T21:55:20+05:30
```

5. You should see the application started successfully as shown below:



```
TransformersApplication [Java Application] /Library/Java/JavaVirtualMachines/jdk1.8.0_201.jdk/Contents/Home/bin/java (06-Apr-2019, 10:03:28 pm)
      ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::        (v2.1.4.RELEASE)

2019-04-06 22:03:28.849  INFO 49069 --- [           main] c.e.t.TransformersApplication            : Starting TransformersApplication on m-c02qg7nk
2019-04-06 22:03:28.852  INFO 49069 --- [           main] c.e.t.TransformersApplication            : No active profile set, falling back to default
2019-04-06 22:03:29.802  INFO 49069 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port(s): 8080 (http)
2019-04-06 22:03:29.829  INFO 49069 --- [           main] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
2019-04-06 22:03:29.830  INFO 49069 --- [           main] org.apache.catalina.core.StandardEngine  : Starting Servlet engine: [Apache Tomcat/9.0.17
2019-04-06 22:03:29.924  INFO 49069 --- [           main] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationCon
2019-04-06 22:03:29.924  INFO 49069 --- [           main] o.s.web.context.ContextLoader            : Root WebApplicationContext: initialization com
2019-04-06 22:03:30.131  INFO 49069 --- [           main] o.s.s.concurrent.ThreadPoolTaskExecutor  : Initializing ExecutorService 'applicationTaskE
2019-04-06 22:03:30.332  INFO 49069 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port(s): 8080 (http) with co
2019-04-06 22:03:30.336  INFO 49069 --- [           main] c.e.t.TransformersApplication            : Started TransformersApplication in 1.824 secon
```

Invoking API's

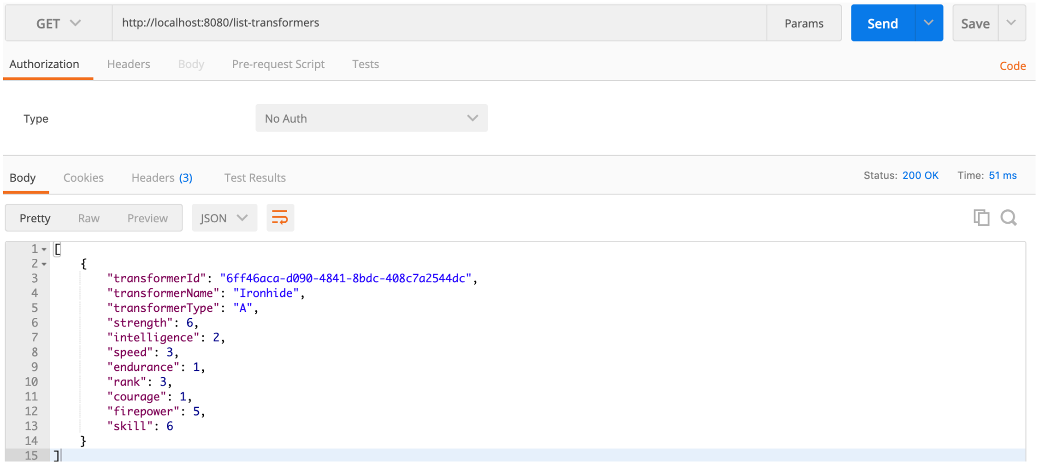
**Screenshots from POSTMAN client

1. **<u>Create Transformer:</u>**

○ Select POST method and hit the following URL with the following request body:
http://localhost:8080/create-transformer

<u>Request body:</u>

```
{
        "transformerName": "Ironhide",
        "transformerType": "A",
        "strength": 6,
        "intelligence": 2,
        "speed": 3,
        "endurance": 1,
        "rank": 3,
        "courage": 1,
        "firepower": 5,
        "skill": 6
}
```



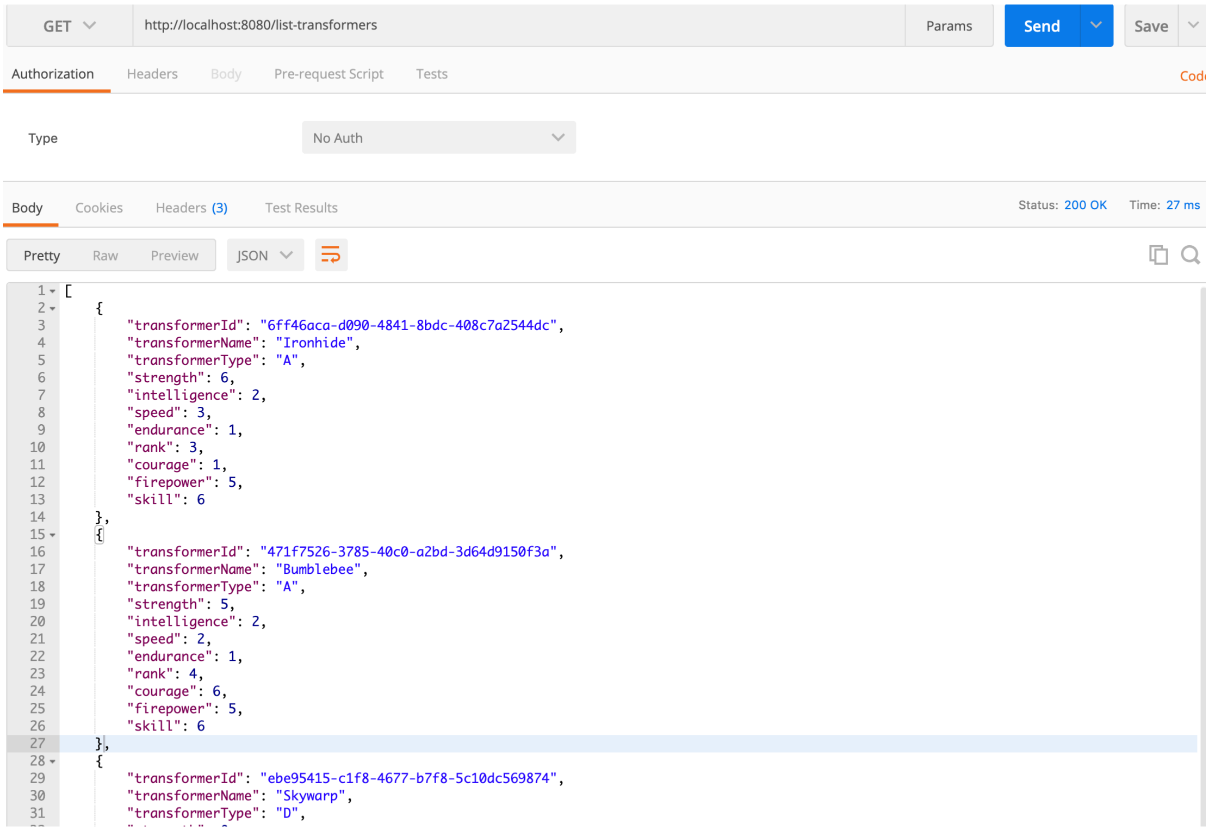
```
[
    {
        "transformerId": "6ff46aca-d090-4841-8bdc-408c7a2544dc",
        "transformerName": "Ironhide",
        "transformerType": "A",
        "strength": 6,
        "intelligence": 2,
        "speed": 3,
        "endurance": 1,
        "rank": 3,
        "courage": 1,
        "firepower": 5,
        "skill": 6
    }
]
```

- In this way, for this project purpose, I have added 3 more sample transformer Id’s by invoking create transformer API.

2. List Transformers

1. Select GET method and hit the following API in POSTMAN client:
   http://localhost:8080/list-transformers

   Output shown below:



GET http://localhost:8080/list-transformers

Type: No Auth

Status: 200 OK Time: 27 ms

JSON

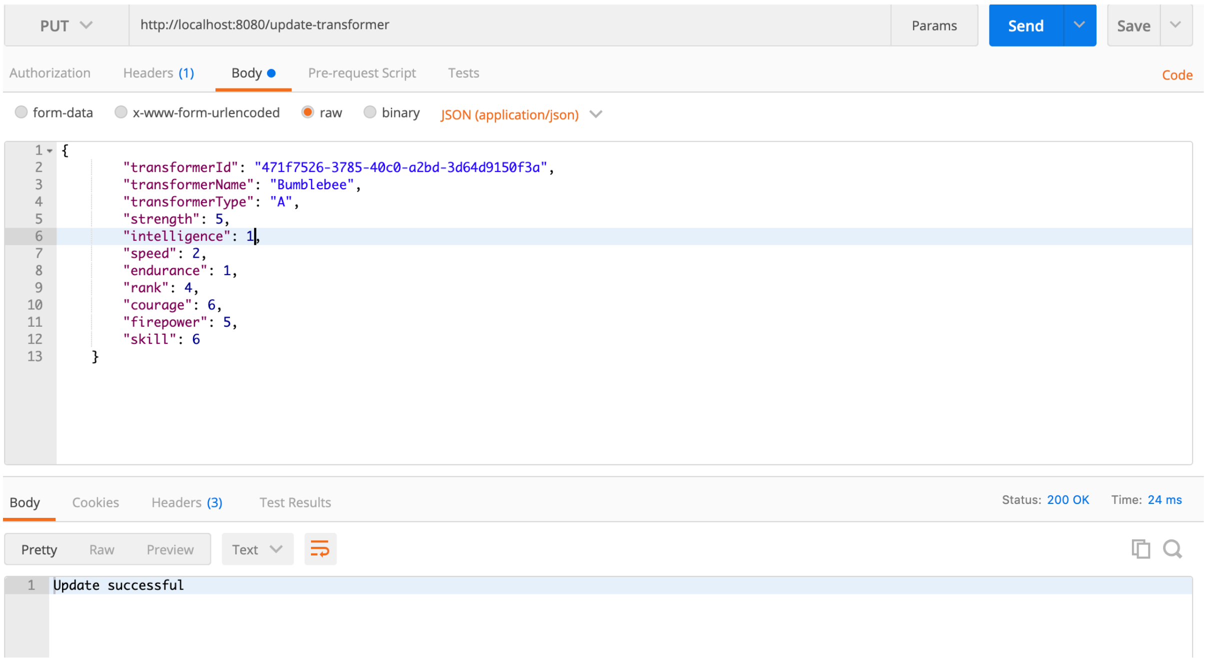
```
[
    {
        "transformerId": "6ff46aca-d090-4841-8bdc-408c7a2544dc",
        "transformerName": "Ironhide",
        "transformerType": "A",
        "strength": 6,
        "intelligence": 2,
        "speed": 3,
        "endurance": 1,
        "rank": 3,
        "courage": 1,
        "firepower": 5,
        "skill": 6
    },
    {
        "transformerId": "471f7526-3785-40c0-a2bd-3d64d9150f3a",
        "transformerName": "Bumblebee",
        "transformerType": "A",
        "strength": 5,
        "intelligence": 2,
        "speed": 2,
        "endurance": 1,
        "rank": 4,
        "courage": 6,
        "firepower": 5,
        "skill": 6
    },
    {
        "transformerId": "ebe95415-c1f8-4677-b7f8-5c10dc569874",
        "transformerName": "Skywarp",
        "transformerType": "D",
```

3. Update Transformer

Select any existing Transformer ID, change any attributes and hit the following PUT request:

http://localhost:8080/update-transformer

Sample output shown below:



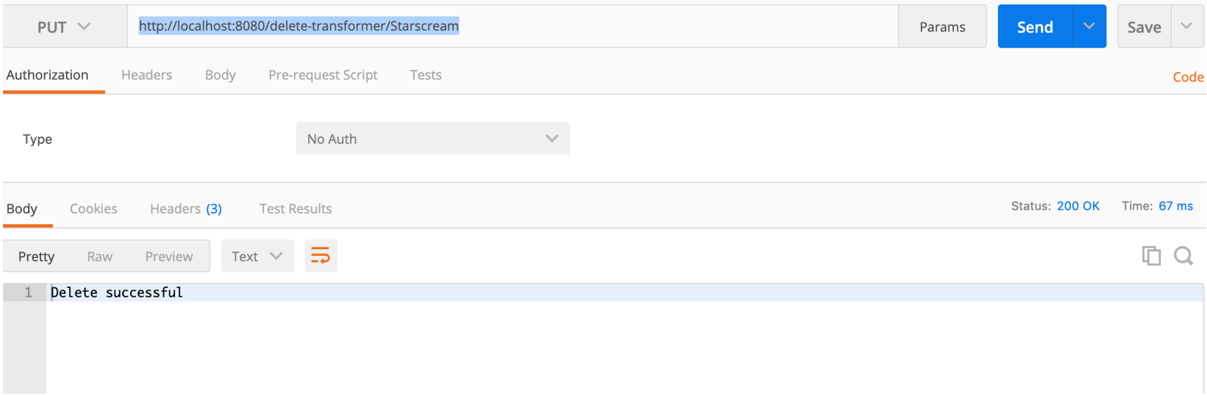
```
{
        "transformerId": "471f7526-3785-40c0-a2bd-3d64d9150f3a",
        "transformerName": "Bumblebee",
        "transformerType": "A",
        "strength": 5,
        "intelligence": 1,
        "speed": 2,
        "endurance": 1,
        "rank": 4,
        "courage": 6,
        "firepower": 5,
        "skill": 6
    }
```

```
Update successful
```

4. Delete Transformer:

Hit the following delete API: (Replace transformerName with any existing Transformer Name)
http://localhost:8080/delete-transformer/{**transformerName**}

For example:
http://localhost:8080/delete-transformer/Starscream



http://localhost:8080/delete-transformer/Starscream

Type: No Auth

```
Delete successful
```

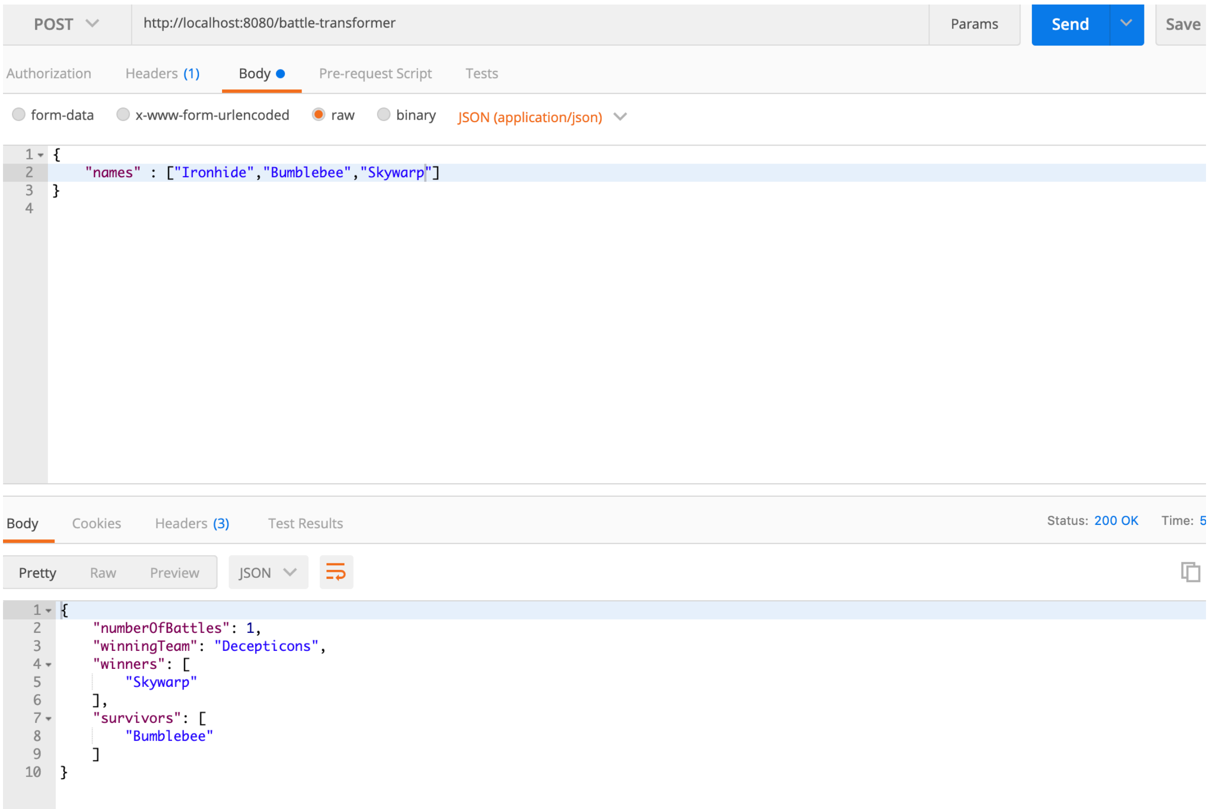
5. Decide the winner API

Hit the following API as POST request with the following request body:
http://localhost:8080/battle-transformer

Request Body:

```
{
        "names" : ["Ironhide","Bumblebee","Skywarp"]
}
```

Output:



POST http://localhost:8080/battle-transformer

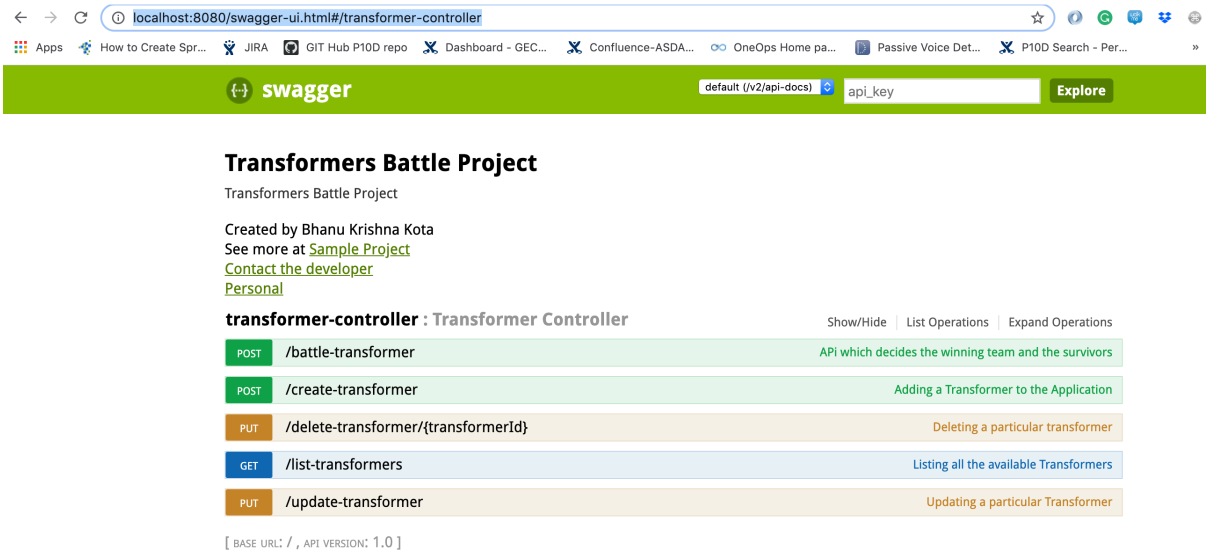
```
{
    "names" : ["Ironhide","Bumblebee","Skywarp"]
}
```

Status: 200 OK Time: 5

```
{
    "numberOfBattles": 1,
    "winningTeam": "Decepticons",
    "winners": [
        "Skywarp"
    ],
    "survivors": [
        "Bumblebee"
    ]
}
```

Swagger API documentation:

http://localhost:8080/swagger-ui.html#/transformer-controller



Transformers Battle Project

Transformers Battle Project

Created by Bhanu Krishna Kota
See more at Sample Project
Contact the developer
Personal

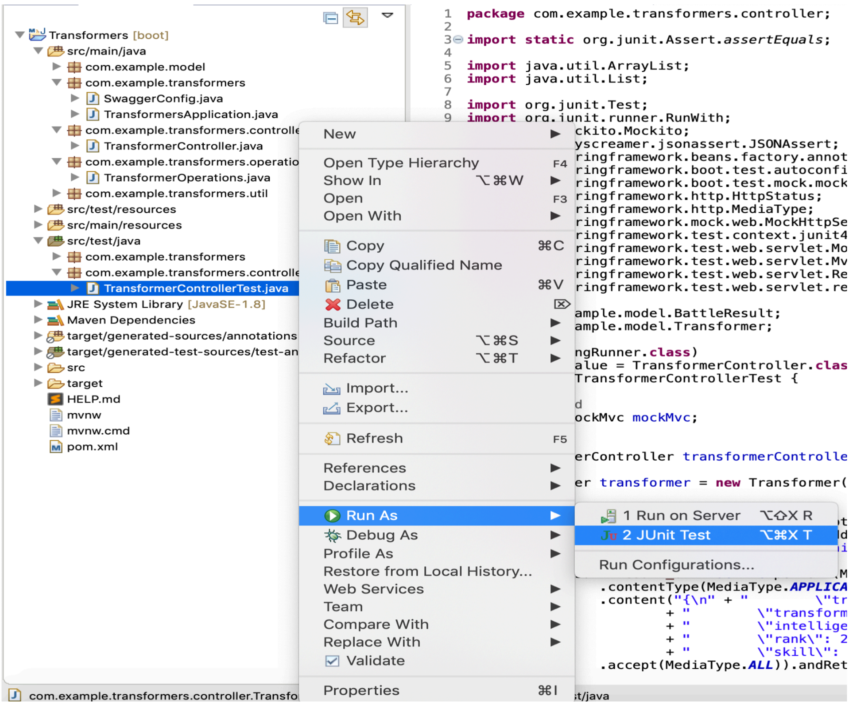
transformer-controller : Transformer Controller

POST	/battle-transformer	APi which decides the winning team and the survivors
POST	/create-transformer	Adding a Transformer to the Application
PUT	/delete-transformer/{transformerId}	Deleting a particular transformer
GET	/list-transformers	Listing all the available Transformers
PUT	/update-transformer	Updating a particular Transformer

[BASE URL: / , API VERSION: 1.0]

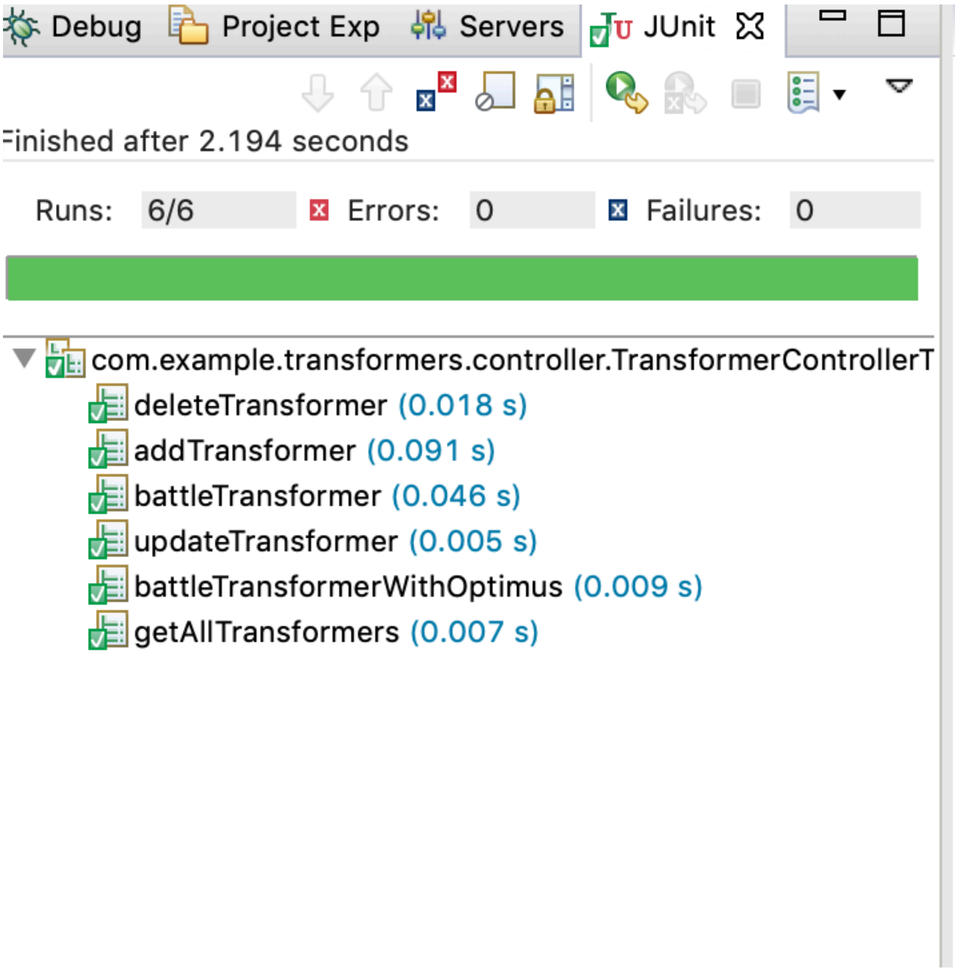
Junit Tests:

Here are the Junit Tests:



```
package com.example.transformers.controller;

import static org.junit.Assert.assertEquals;

import java.util.ArrayList;
import java.util.List;

import org.junit.Test;
import org.junit.runner.RunWith;
ckito.Mockito;
yscreamer.jsonassert.JSONAssert;
ringframework.beans.factory.annot
ringframework.boot.test.autoconfi
ringframework.boot.test.mock.mock
ringframework.http.HttpStatus;
ringframework.http.MediaType;
ringframework.mock.web.MockHttpSe
ringframework.test.context.junit4
ringframework.test.web.servlet.Mo
ringframework.test.web.servlet.Mv
ringframework.test.web.servlet.Re
ringframework.test.web.servlet.re

ample.model.BattleResult;
ample.model.Transformer;

ngRunner.class)
alue = TransformerController.clas
TransformerControllerTest {

d
ockMvc mockMvc;

erController transformerControlle

er transformer = new Transformer(
                                    t
                                    d
                                    i
                                    M
    .contentType(MediaType.APPLICA
    .content("{\n" + "          \"tr
            + "          \"transform
            + "          \"intellige
            + "          \"rank\": 2
            + "          \"skill\":
    .accept(MediaType.ALL)).andRet
```

Output:



```
Finished after 2.194 seconds

Runs: 6/6    Errors: 0    Failures: 0

com.example.transformers.controller.TransformerControllerT
    deleteTransformer (0.018 s)
    addTransformer (0.091 s)
    battleTransformer (0.046 s)
    updateTransformer (0.005 s)
    battleTransformerWithOptimus (0.009 s)
    getAllTransformers (0.007 s)
```