

CMPE-272 -Enterprise Software Platforms
Karaf

Aim: To build a web application and use twitter API to access values using karaf web container

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Abstract:

We need to implement 8 Twitter API and deploy it in Karaf web container

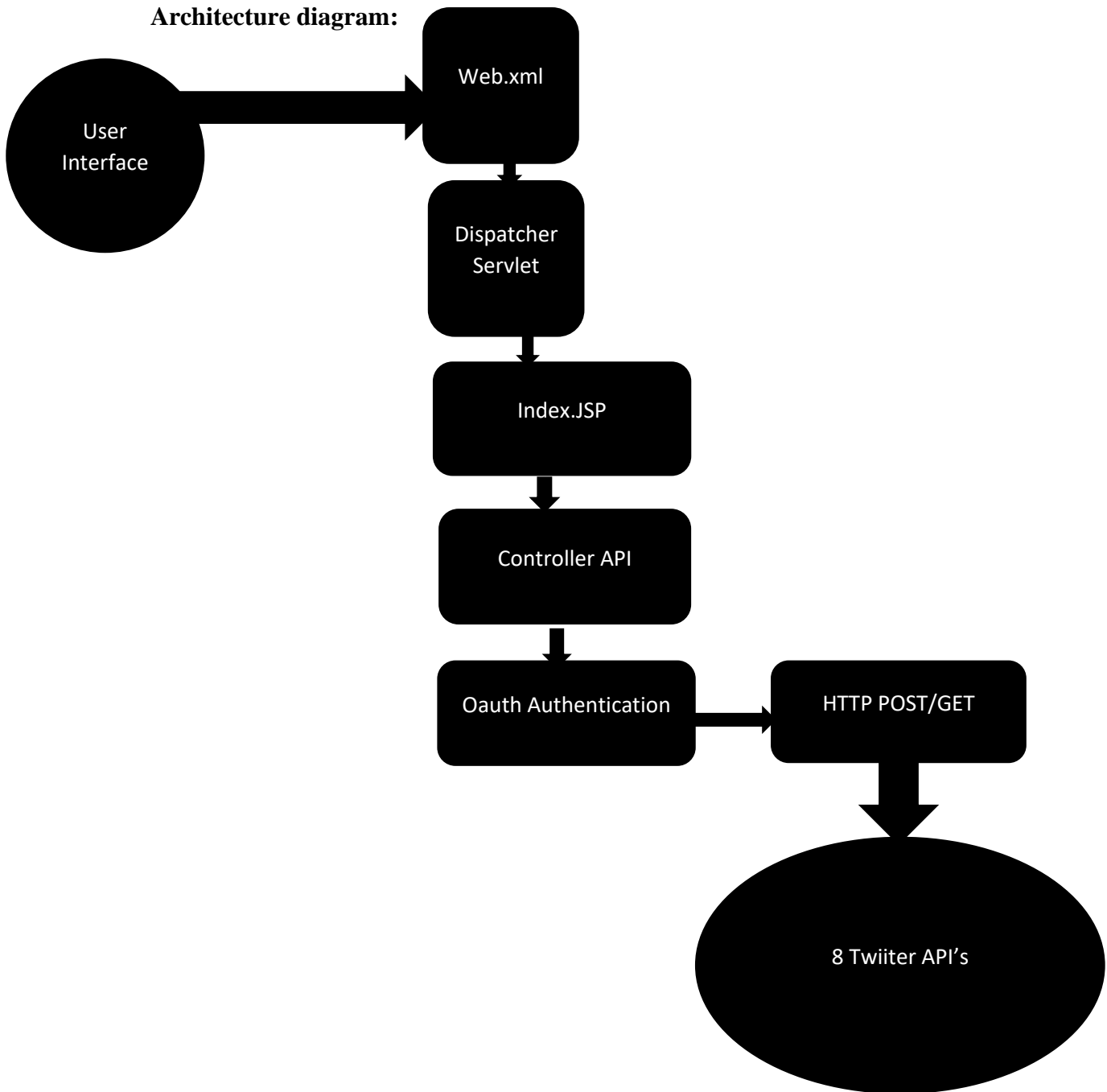
Technologies used:

1. Java 9
2. HTML ,Bootstrap
3. Ajax
4. JQuery
5. Web Services-REST
6. OAuth
7. Karaf Web Container

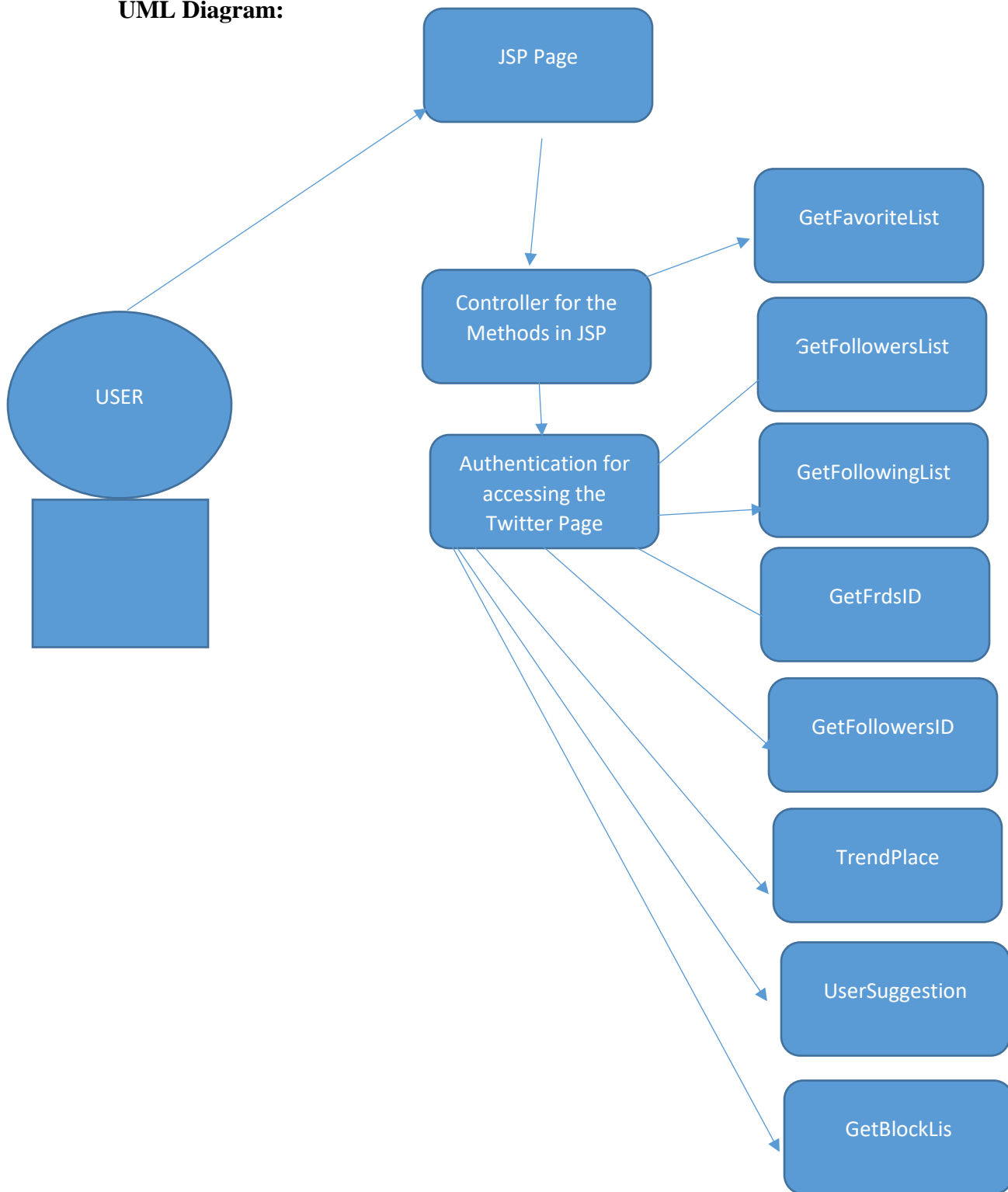
Steps followed:

1. Downloaded Karaf and unzip it.
2. Created a Maven Spring Web application using java in eclipse.
3. Imported all the needed maven dependencies in pom.xml.
4. Create an app in twitter and get the access details.
5. Write JSP file to get the input values from the user.
6. Build the war file.
7. Open the Karaf bin folder and go to command prompt run karaf.bat
8. Deploy the generated war file in deploy folder in karaf web container.
9. Give the command LIST it will list the war deployed in the web container.
10. Go to console give localhost:8181/war name.

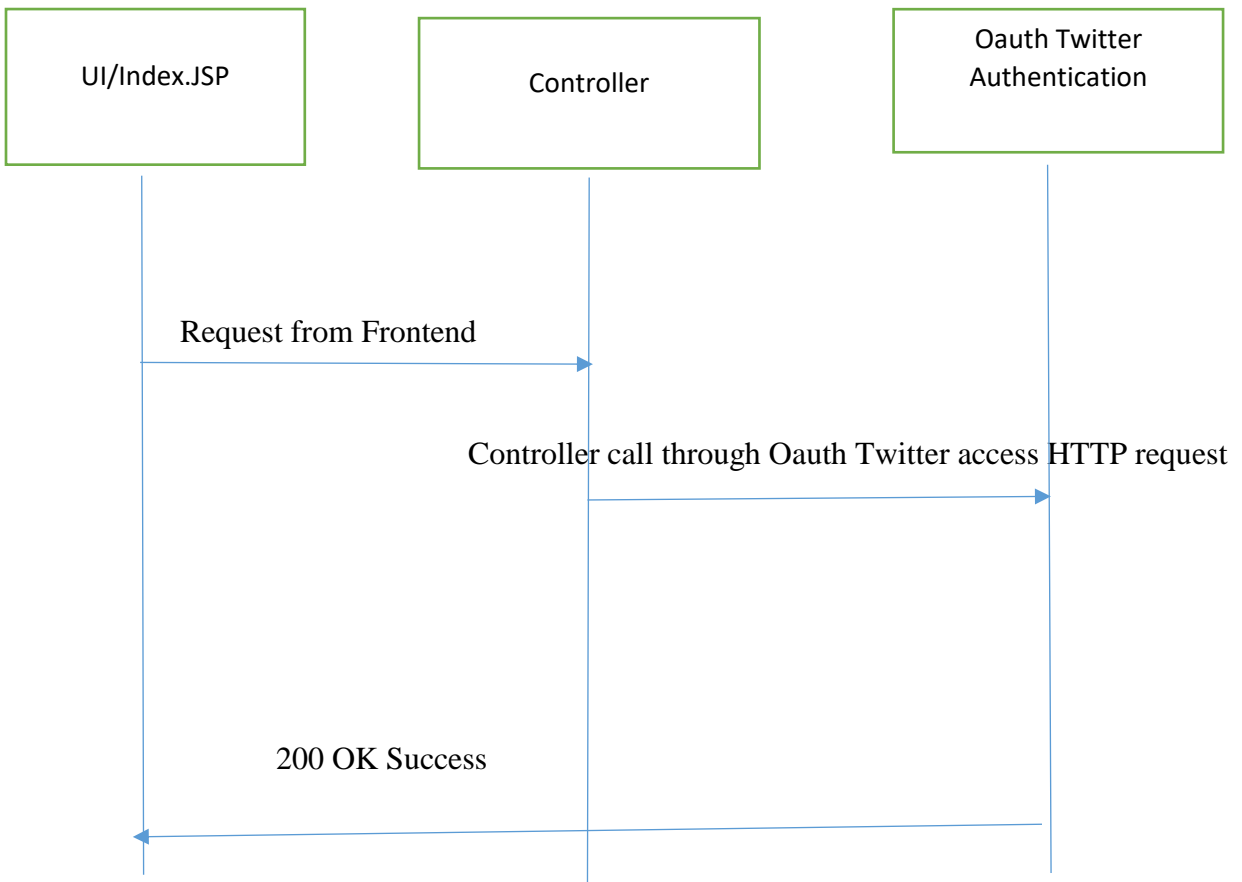
Architecture diagram:



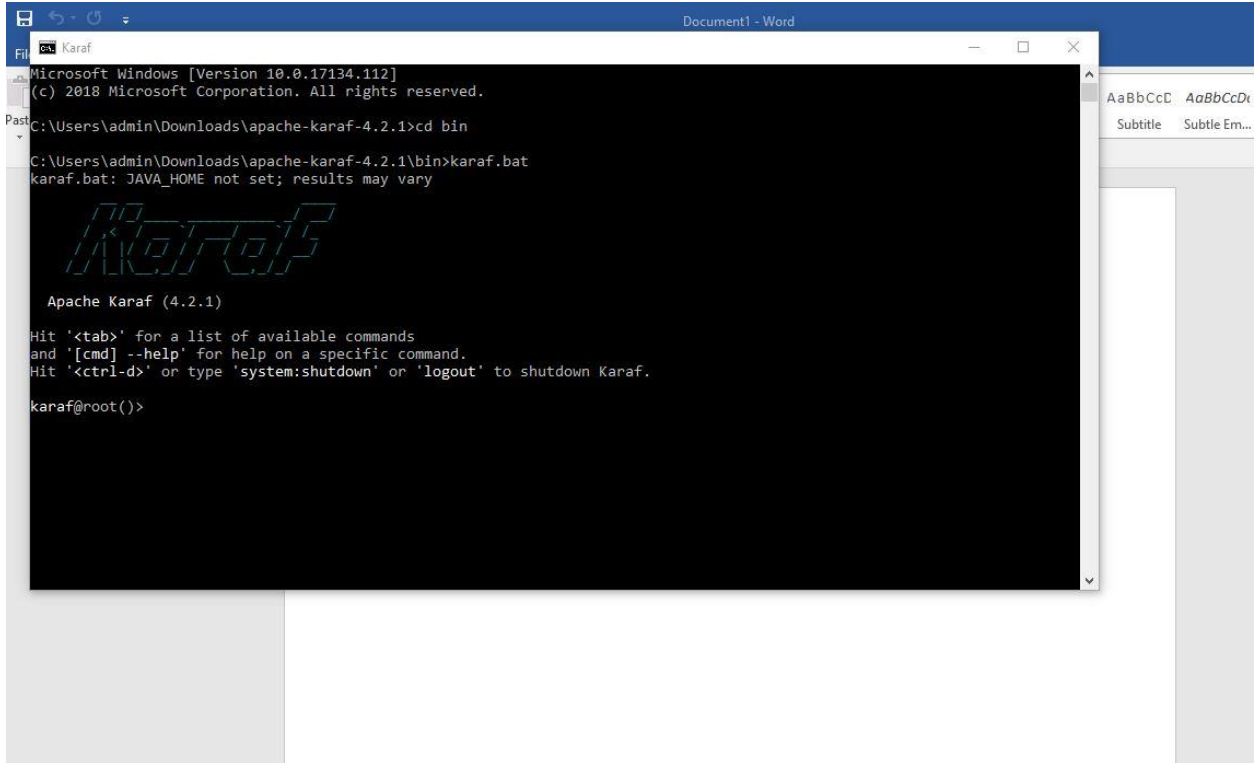
UML Diagram:



Sequence Diagram:



1. Install Karaf



```
Microsoft Windows [Version 10.0.17134.112]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\admin\Downloads\apache-karaf-4.2.1>cd bin

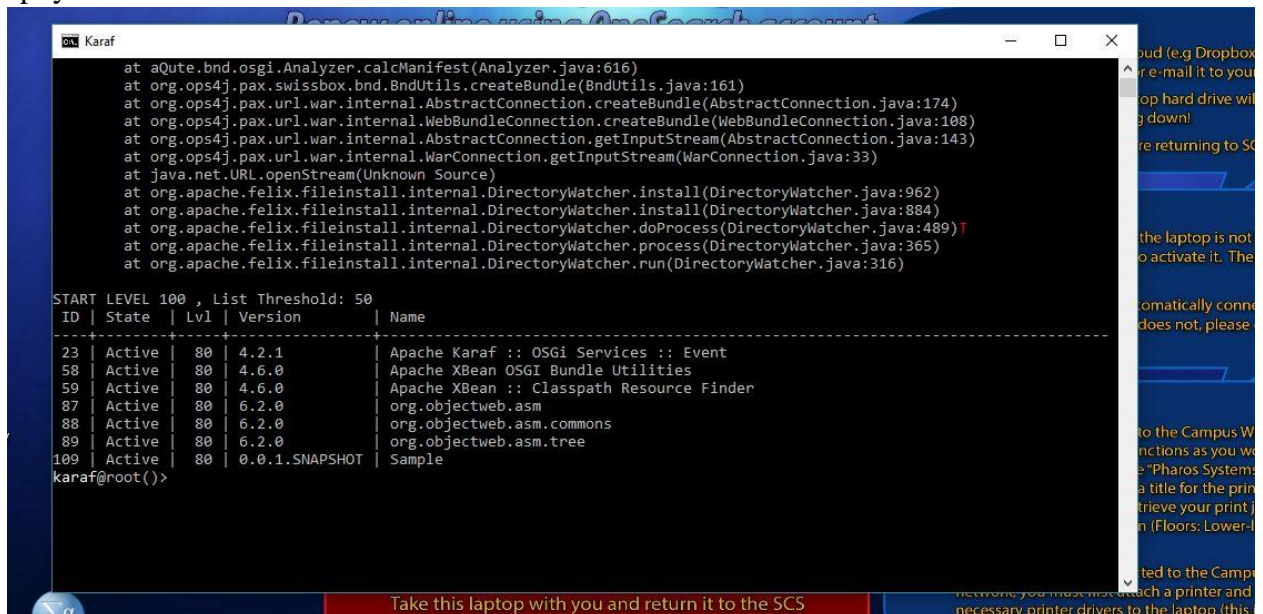
C:\Users\admin\Downloads\apache-karaf-4.2.1\bin>karaf.bat
karaf.bat: JAVA_HOME not set; results may vary

Apache Karaf (4.2.1)

Hit '<tab>' for a list of available commands
and '[cmd] --help' for help on a specific command.
Hit '<ctrl-d>' or type 'system:shutdown' or 'logout' to shutdown Karaf.

karaf@root(>
```

2. Deployed the war in web container



```
at aQute.bnd.osgi.Analyzer.calcManifest(Analyzer.java:616)
at org.ops4j.pax.swissbox.bnd.BndUtils.createBundle(BndUtils.java:161)
at org.ops4j.pax.url.war.internal.AbstractConnection.createBundle(AbstractConnection.java:174)
at org.ops4j.pax.url.war.internal.WebBundleConnection.createBundle(WebBundleConnection.java:108)
at org.ops4j.pax.url.war.internal.AbstractConnection.getInputStream(AbstractConnection.java:143)
at org.ops4j.pax.url.war.internal.WarConnection.getInputStream(WarConnection.java:33)
at java.net.URL.openStream(Unknown Source)
at org.apache.felix.fileinstall.internal.DirectoryWatcher.install(DirectoryWatcher.java:962)
at org.apache.felix.fileinstall.internal.DirectoryWatcher.install(DirectoryWatcher.java:884)
at org.apache.felix.fileinstall.internal.DirectoryWatcher.doProcess(DirectoryWatcher.java:489)
at org.apache.felix.fileinstall.internal.DirectoryWatcher.process(DirectoryWatcher.java:365)
at org.apache.felix.fileinstall.internal.DirectoryWatcher.run(DirectoryWatcher.java:316)

START LEVEL 100 , List Threshold: 50
ID | State | Lvl | Version | Name
-----
23 | Active | 80 | 4.2.1 | Apache Karaf :: OSGi Services :: Event
58 | Active | 80 | 4.6.0 | Apache XBean OSGI Bundle Utilities
59 | Active | 80 | 4.6.0 | Apache XBean :: Classpath Resource Finder
87 | Active | 80 | 6.2.0 | org.objectweb.asm
88 | Active | 80 | 6.2.0 | org.objectweb.asm.commons
89 | Active | 80 | 6.2.0 | org.objectweb.asm.tree
109 | Active | 80 | 0.0.1.SNAPSHOT | Sample

karaf@root(>
```

3. Run the webconsole localhost:8181/Sample

Twitter API	Enter	Submit
https://api.twitter.com/1.1/favorites/list.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>
https://api.twitter.com/1.1/friends/list.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>
https://api.twitter.com/1.1/followers/list.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>
https://api.twitter.com/1.1/friends/ids.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>
https://api.twitter.com/1.1/followers/ids.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>
https://api.twitter.com/1.1/trends/available.json	No need to enter values	<button>Submit</button>
https://api.twitter.com/1.1/blocks/list.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>
https://api.twitter.com/1.1/users/suggestions.json	<input type="text" value="Enter your twitter account name"/>	<button>Submit</button>

4. 200 Ok for Favorite List

localhost:8181 says
200 ok

OK

5.200 ok for Friends List

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API

localhost:8181 says
200 ok

OK

Submit

Submit

SoundAmtha

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

No need to enter values

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

6.200 Ok for Followers List

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API

localhost:8181 says
200 ok

OK

Submit

Submit

Enter your twitter account name

Submit

SoundAmtha

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

No need to enter values

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

7.200 Ok for friends Ids

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API

localhost:8181 says
200 ok

OK

Submit

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

SoundAmtha

Submit

Enter your twitter account name

Submit

No need to enter values

Submit

Enter your twitter account name

Submit

Enter your twitter account name

Submit

8.200 for followers Id

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API		Submit
https://api.twitter.com/1.1/favorites/list.json		Submit
https://api.twitter.com/1.1/friends/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/friends/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/ids.json	SoundAmtha	Submit
https://api.twitter.com/1.1/trends/available.json	No need to enter values	Submit
https://api.twitter.com/1.1/blocks/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/users/suggestions.json	Enter your twitter account name	Submit

8.200 ok for trends Available

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API		Submit
https://api.twitter.com/1.1/favorites/list.json		Submit
https://api.twitter.com/1.1/friends/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/friends/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/trends/available.json	No need to enter values	Submit
https://api.twitter.com/1.1/blocks/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/users/suggestions.json	Enter your twitter account name	Submit

9 200 ok for Block List

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API

200 ok

OK

		Submit
https://api.twitter.com/1.1/favorites/list.json		Submit
https://api.twitter.com/1.1/friends/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/friends/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/trends/available.json	No need to enter values	Submit
https://api.twitter.com/1.1/blocks/list.json	SoundAmtha	Submit
https://api.twitter.com/1.1/users/suggestions.json	Enter your twitter account name	Submit

10 200 ok for Users Suggestion

localhost:8181/Sample/?Statusname=SoundAmtha&followersList=&followingList=&friendsIds=

MLK Library SJSU Home SCS SJSUOne Account MySJSU

Twitter API

200 ok

OK

		Submit
https://api.twitter.com/1.1/favorites/list.json		Submit
https://api.twitter.com/1.1/friends/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/friends/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/followers/ids.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/trends/available.json	No need to enter values	Submit
https://api.twitter.com/1.1/blocks/list.json	Enter your twitter account name	Submit
https://api.twitter.com/1.1/users/suggestions.json	SoundAmtha	Submit

JUnit Test Cases:

The screenshot displays an IDE with a Java file named `TestTweetAPI.java` and a JUnit test runner window.

Test Case Code:

```
1 package com.dexters.Testing;
2
3 import java.util.HashMap;
4
11
12 public class TestTweetAPI {
13     TwitterServiceAPI twitterserviceAPI = new TwitterServiceAPI();
14
15     @Test
16     public void testGetfollowersList() {
17         HashMap<String, Object> _testvalue = twitterserviceAPI.GetfollowersList("Test");
18         Assert.assertNotNull(_testvalue);
19     }
20
21     @Test
22     public void testGetfollowingList() {
23         List<String> _testvalue = twitterserviceAPI.GetfollowingList("Test");
24         Assert.assertNotNull(_testvalue);
25     }
26
27     @Test
28     public void testGetfriendsIds() {
29         List<Integer> _testvalue = twitterserviceAPI.GetfriendsIds("Test");
30         Assert.assertNotNull(_testvalue);
31     }
32
33     @Test
34     public void testGetfollowerssIds() {
35         List<Integer> _testvalue = twitterserviceAPI.GetfollowerssIds("Test");
36         Assert.assertNotNull(_testvalue);
37     }
38
39     @Test
40     public void testGetTrendPlace() {
41         List<String> _testvalue = twitterserviceAPI.GetTrendPlace();
42         Assert.assertNotNull(_testvalue);
43     }
44
45     @Test
46     public void testGetBlockList() {
```

JUnit Runner Results:

Finished after 3.703 seconds

Runs: 8/8 Errors: 0 Failures: 0

com.dexters.Testing.TestTweetAPI [Runner: JUnit4]

- testGetfollowingList (1.712 s)
- testGetfollowersList (0.202 s)
- testGetUserSuggestion (0.218 s)
- testGetfollowerssIds (0.178 s)
- testGetfavoriteList (0.182 s)
- testGetBlockList (0.742 s)
- testGetTrendPlace (0.243 s)
- testGetfriendsIds (0.189 s)