

## CMPE-272 - Enterprise Software Platforms - Assignment #2

### Problem Statement:

Write a client application that uses an Apache Camel / Apache Karaf Container framework and implements the Twitter REST API - <http://twitsandbox.com/?lang=en>  
Implement at least 8 of the APIs

**Team Name -** Phoenix Risers  
**Team Members -** Anand Muralidhara  
Prathyusha Kasibhatta  
Sandhya Gadgoli  
Snehal Yeole  
Thirumalai Nambi Doss

### Team GitHub Repository:

<https://github.com/sandhyagad/PhoenixRisers/tree/master/Twitterkaraf>

### Abstract:

Demonstration of Twitter API integration with custom java web application and deployment on Apache Karaf Container.

1. Implemented 8 Twitter APIs to illustrate Twitter Web Application integration.
2. OAuth protocol is used to establish authentication between our java web application and Twitter.
3. Using Java's Servlet classes and Signpost, Twitter REST APIs are invoked.
4. The responses are received in JSON format which is then used to display informative messages to the end user. We are using JSP and JavaScript to render data to the user.
5. Apache Karaf is used to provide a deployment environment for this module.

### Individual Contribution –

Below are the individual contribution from each members –

Anand Muralidhara

- GET favorites/list
- GET trends/available

Prathyusha Kasibhatta

- GET followers/list
- POST statuses/update

Sandhya Gadgoli

- POST blocks/create
- GET blocks/list

Snehal Yeole

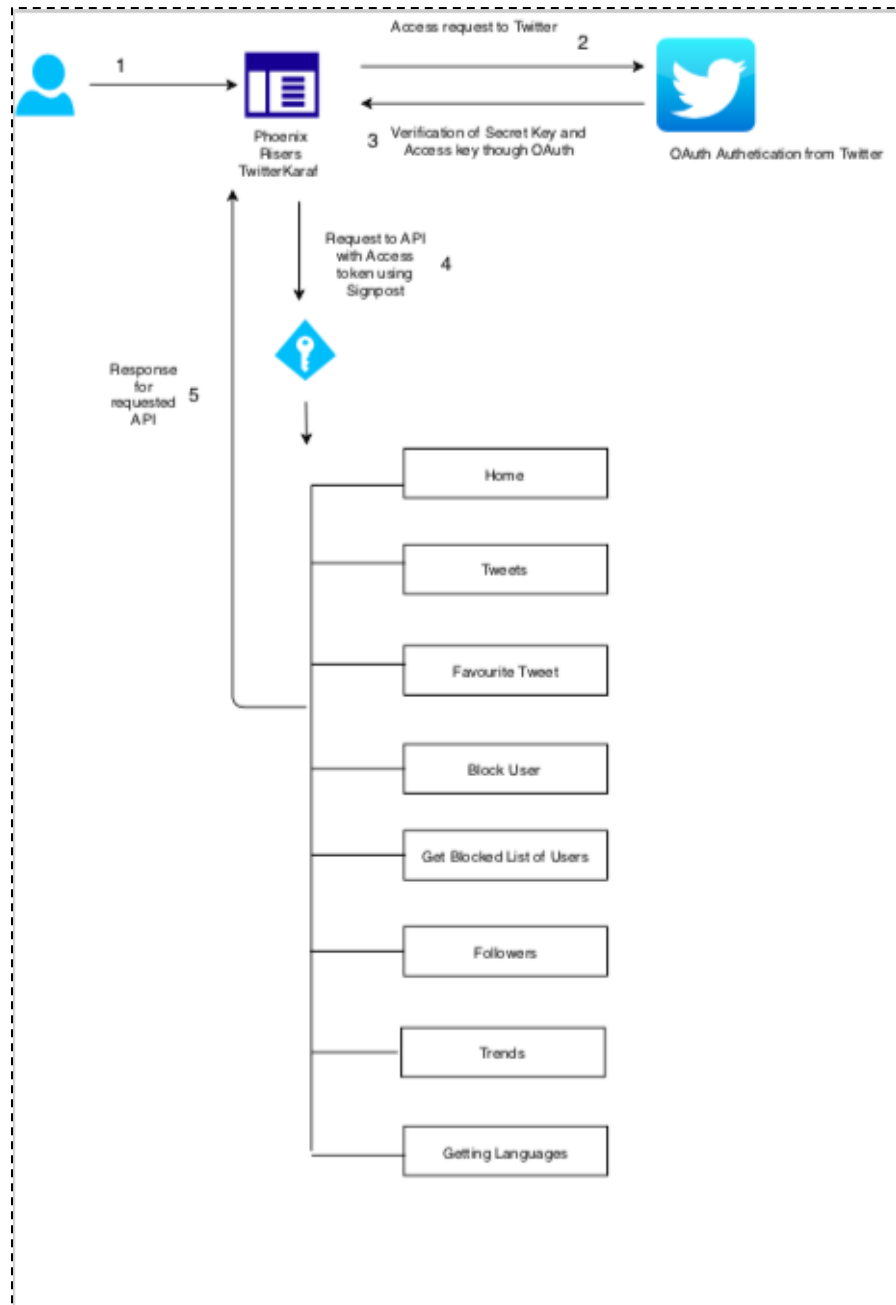
- GET help/Languages
- Statuses/Home\_timeline

Thirumalai Nambi Doss

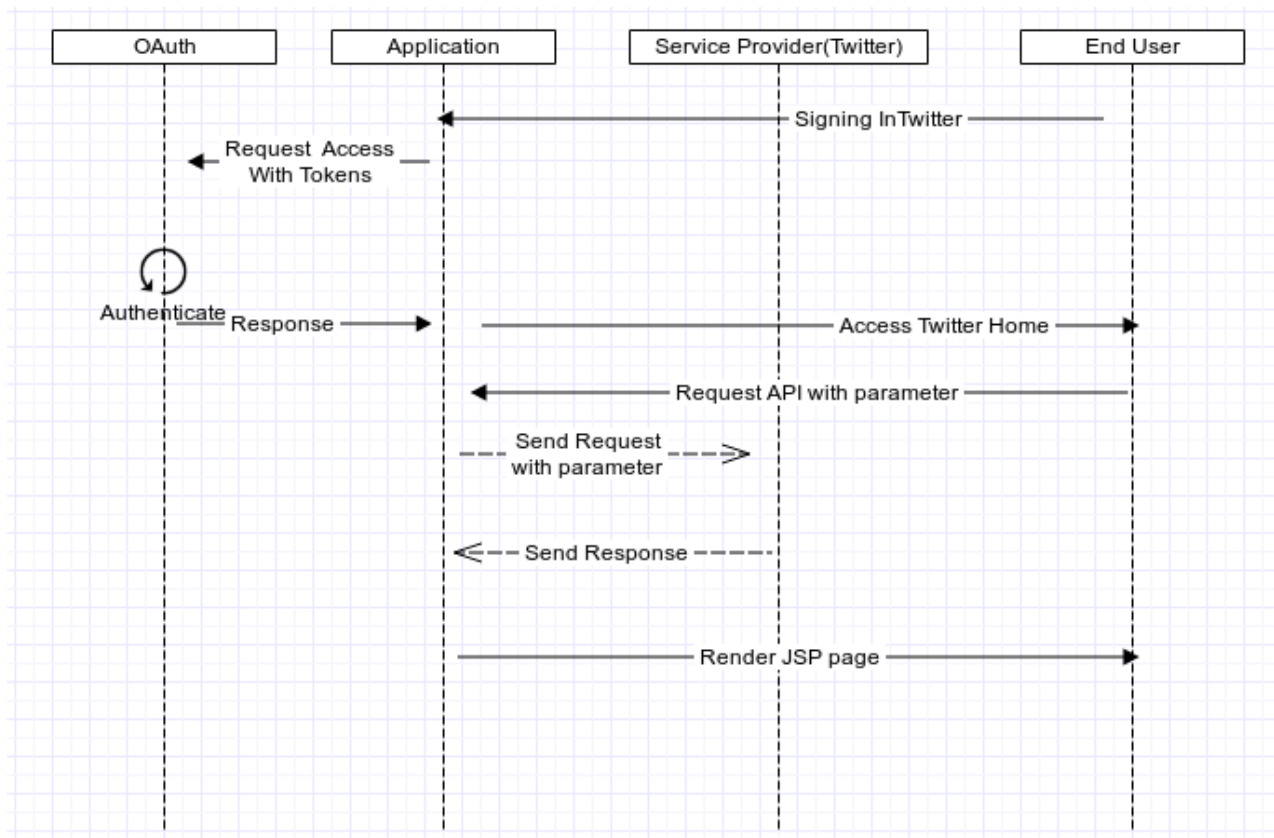
- Integration of all APIs
- Testing & Documentation

## Architecture Diagram:

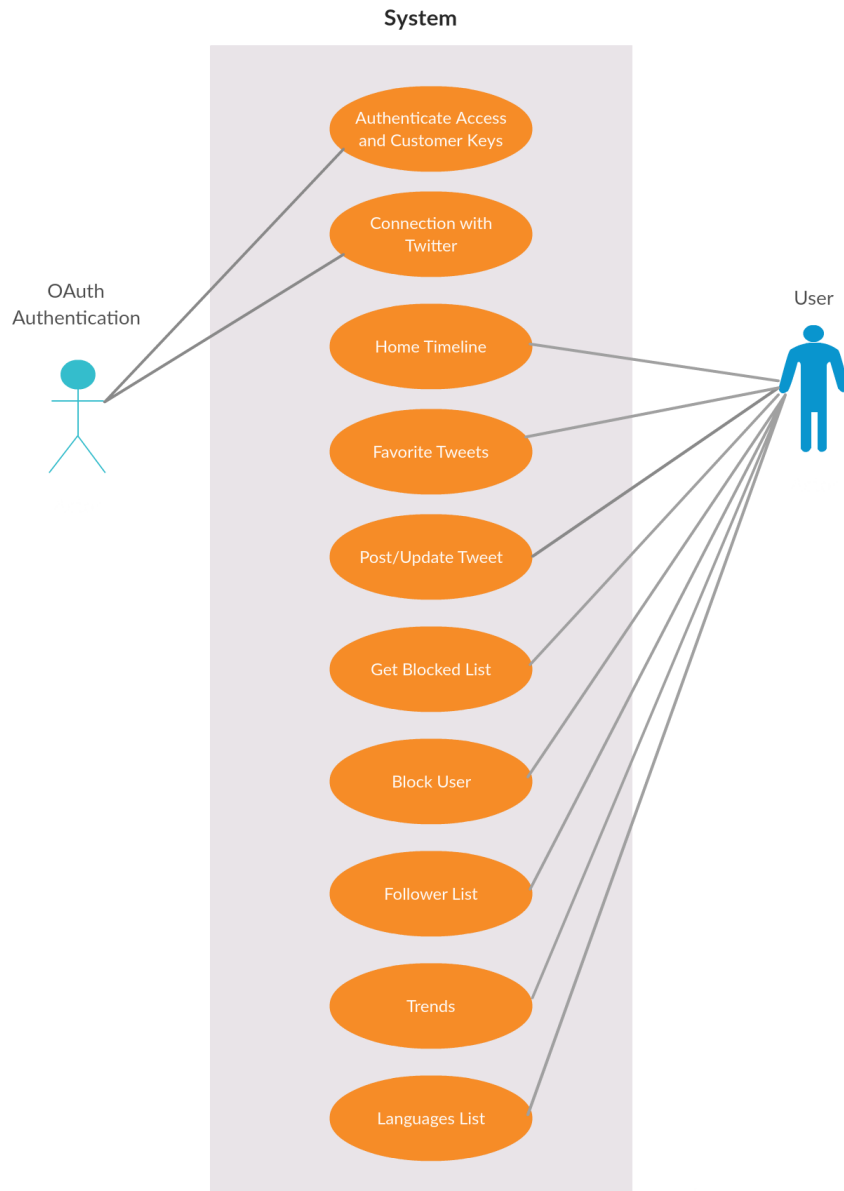
### Karaf Container



## Sequence Diagram:



## Use Case Diagram:



## Frameworks/Tools:

1. Eclipse
2. Apache Karaf Container
3. Java Http Servlet
4. JSP
5. JavaScript

6. Signpost
7. Twitter APIs
8. JUnit

### Apache Karaf Installation and WAR deployment:

1. Download apache karaf 4.2.1 and extract the file.
2. Open Terminal and navigate to the extracted folder and launch Karaf container by executing `$ bin/karaf`.



```
Arno@Arno-Cliri-Mac:~/Downloads/apache-karaf-4.2.1 $ bin/karaf

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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(>
```

3. Copy the war file into the deploy folder inside karaf.
4. Run the following commands
  - a. `feature:install war`
  - b. `feature:install http`
  - c. `feature:install webconsole`
5. Use the command 'LIST' to see whether the twitterKaraf application is in the active state.
6. Open the `localhost:8181/{war file name}` to launch the application.

```
C:\Users\Anand Muralidhar\Downloads\apache-karaf-4.2.1\apache-karaf-4.2.1\bin>karaf.bat
```



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(> feature:install war
karaf@root(> feature:install http
karaf@root(> feature:install webconsole
karaf@root(> LIST
```

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
115	Active	80	0.0.0	twitterkaraf
118	Active	80	0.0.0	a

```
karaf@root(>
```

apache-karaf-4.2.1 — java — bash — Pro — 80x24 — 1



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(> LIST
```


START LEVEL 100 , List Threshold: 50

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88	Active	80	6.2.0	org.objectweb.asm.commons
89	Active	80	6.2.0	org.objectweb.asm.tree
111	Active	80	0.0.0	twitterkaraf

```
karaf@root(>
```

Created App in twitter developers account:

## Apps

-   
**Twitter-karaf**  
App ID  
15943997  
[Details](#)

Keys generated:

**Keys and tokens**  
Keys, secret keys and access tokens management.

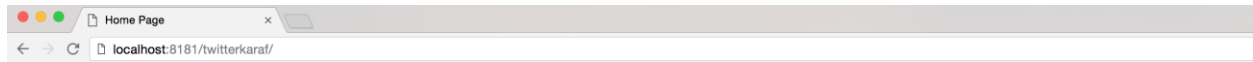
**Consumer API keys**  
tJ2dolamkmT2fsTbfZEDeXGvL (API key)  
QMI58TxxGDVkcA0tfzhwvracBny4b4QtKaKbpzBcTAfA7N1LMo (API secret key)  
[Regenerate](#)

**Access token & access token secret**  
1058257597365538817-XKFEwicNjKf8PKxJMB7fZpxZXXVpZc (Access token)  
eXKSnVklr2skwKT9BedF9oOQJwLkcOznQukvjXZfWFPO9 (Access token secret)  
Read and write (Access level)  
[Revoke](#) [Regenerate](#)



Below are the application screenshots for implemented Twitter APIs

## Home Page:



## API's

### 1)GET statuses/home\_timeline



#### Timeline

timesofindia : Blog | Five things that scare me about #MeToo <https://t.co/czQScPD4vT> via @TOIOpinion <https://t.co/aONTXS6JUT>

timesofindia : Column | Calls for Ayodhya temple law mean it's Ram bharse again in 2019 <https://t.co/IXoPotITLs> via @TOIOpinion <https://t.co/OyCotYeDND>

Fact : Research concludes doing things that scare you will make you happier.

timesofindia : This is how much @deepikapadukone's 'Mangalsutra' cost her via @etimes <https://t.co/Om6ieyy7b>

timesofindia : Wanted to capture T1 alive, says Hyderabad shooter Nawab Asghar <https://t.co/vtaiMt5635> via @TOIHyderabad <https://t.co/M8QYJarE0F>

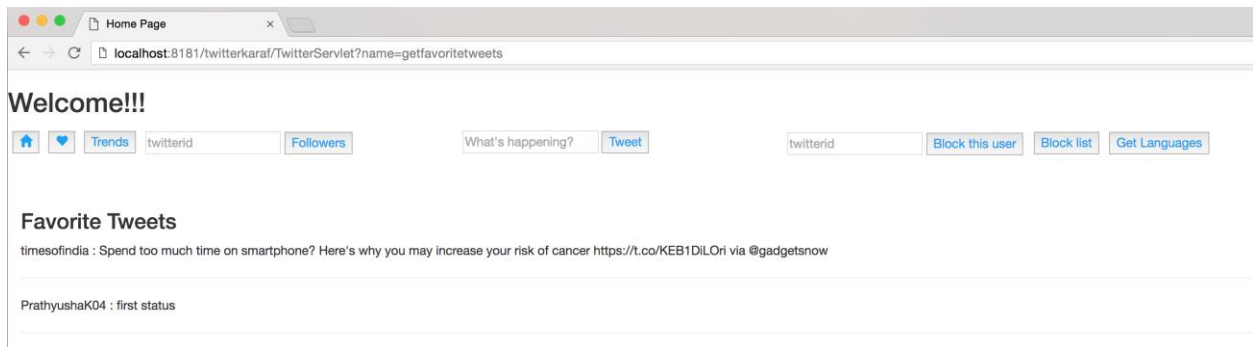
Fact : We are subconsciously more attracted to people who have the same music taste as we do.

Fact : Crying can strengthen your immune system and relieve stress. Check out these 9 benefits of having a good cry... <https://t.co/VsnavXOeby>

timesofindia : As Delhi's Signature Bridge opens, rush to ease on Ring Road and National Highway-9 <https://t.co/f6tuv6yA41> via... <https://t.co/V6i5dheevT>

Fact : According to a study, kids as young as 4 years old just want to be friends with other kids who know the same songs they do.

### 2)GET favorites/list



Output same as in my twitter account:



### 3)GET trends/available

Home Page

localhost:8181/twitterkaraf/TwitterServlet?name=gettrends

Welcome!!!

Home

Heart

Trends

twitterid

Followers

What's happening?

Tweet

twitterid

Block this user

Block list

Get Languages

Available Trends

Canada : http://where.yahooapis.com/v1/place/2972

Canada : http://where.yahooapis.com/v1/place/3369

Canada : http://where.yahooapis.com/v1/place/3444

Canada : http://where.yahooapis.com/v1/place/3534

Canada : http://where.yahooapis.com/v1/place/4118

Canada : http://where.yahooapis.com/v1/place/8676

Canada : http://where.yahooapis.com/v1/place/8775

Canada : http://where.yahooapis.com/v1/place/9807

United Kingdom : http://where.yahooapis.com/v1/place/12723

United Kingdom : http://where.yahooapis.com/v1/place/12903

### 4)GET followers/list

msdhoni

Followers

Home Page

localhost:8181/twitterkaraf/TwitterServlet?name=followerslist

Welcome!!!

Home

Heart

Trends

twitterid

Followers

What's happening?

Tweet

twitterid

Block this user

Block list

Get Languages

Followers

Duggu Singh : duggukuch

Pratik Gupta : PratikG97755490

Mansoor Bhai : MansoorBhai14

Hari Rajendran : HariRajendran11

Kailash : Kailash86442904

Manikandan : Manikan53291037

Vengal chowdary ☐ : Vengalchowdary9

ragu ram : raguram94195952

Mayra Rahman : MayraRahman

Manikandan S : Manikan23806369

## 5)POST statuses/update

Hello KARAF.....

Tweet

Home Page

localhost:8181/twitterkaraf/TwitterServlet?name=statusupdate

Welcome!!!

Home

Heart

Trends

twitterid

Followers

What's happening?

Tweet

twitterid

Block this user

Block list

Get Languages

Status Update


Tweeted: Hello KARAF.....

output in twitter:





**Prathyusha Kasibhatta**  
@PrathyushaK04  
Joined November 2018


Tweets

Tweets & replies








**Prathyusha Kasibhatta** @PrathyushaK04 · 2m  
Hello KARAF....





**Prathyusha Kasibhatta** @PrathyushaK04 · 22h  
first status

 1



6)POST blocks/create



phani\_harika

Block this user

Home Page

localhost:8181/twitterkaraf/TwitterServlet?name=blockuser

Welcome!!!

 Trends

twitterid

Followers

What's happening?

Tweet

twitterid

Block this user

Block list

Get Languages

Blocked User


Blocked user: phani\_harika

## Accounts you're blocking

You've blocked these accounts. You will not see their Tweets in your timeline. Additionally, blocked accounts cannot follow you or view your profile while logged in to Twitter. Learn more about [blocking](#).


All / Imported

Advanced options ▾



**phani harika**@phani\_harika

Blocked



## 7)GET blocks/list

Home Page

localhost:8181/twitterkaraf/TwitterServlet?name=blocklist

Welcome!!!

Home

Heart

Trends

twitterid

Followers

What's happening?

Tweet

twitterid

Block this user

Block list

Get Languages

Blocked Accounts

Mounika devi : devimounika25


phani harika : phani\_harika

Accounts you're blocking

You've blocked these accounts. You will not see their Tweets in your timeline. Additionally, blocked accounts cannot follow you or view your profile while logged in to Twitter. Learn more about [blocking](#).

All / Imported


Advanced options ▾



Mounika devi@devimounika25

Blocked

⋮



phani harika@phani\_harika

Blocked

⋮

## 8)GET help/languages

Home Page

localhost:8181/twitterkaraf/TwitterServlet?name=getlanguage

Welcome!!!

Home

Heart

Trends

twitterid

Followers

What's happening?

Tweet

twitterid

Block this user

Block list

Get Languages

Languages Supported

French

English

Arabic

Japanese

Spanish

German

Italian

Indonesian

Portuguese

Korean

## JUnit Test:



Finished after 3.824 seconds

Runs: 8/8 Errors: 0 Failures: 0



- Twitterkaraf.AppTest [Runner: JUnit 4]
  - testStatusUpdate (1.502 s)
  - testLanguagesSupported (0.281 s)
  - testTrendsAvailable (0.348 s)
  - testFollowersList (0.579 s)
  - testHomeTimeline (0.240 s)
  - testFavoriteTweets (0.332 s)
  - testBlockList (0.164 s)
  - testBlockUser (0.291 s)

