DOSP Project 4 Part 2 Report

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About

Simulation of out Twitterbot using CowBoy HTTP Server and rebar to build the erlang application

Execution Details

1) **To build the Application and run it**
    a. `make -f erlang.mk bootstrap bootstrap-rel`
    b. `make run`
2) To start the Twitter Engine,
    a. Input: engine:start()
    b.
```
(engine@RayanMBP)1> engine:start().

 Welcome to the new Twitter Service!
```
3) To start a client
    a. Input: client:start()
    b.
```
(client@RayanMBP)1> client:start().

 New Client connecting

 connection request to server sent
```
4) To send a command in the client
    a. register
    b. tweet
    c. retweet
    d. query

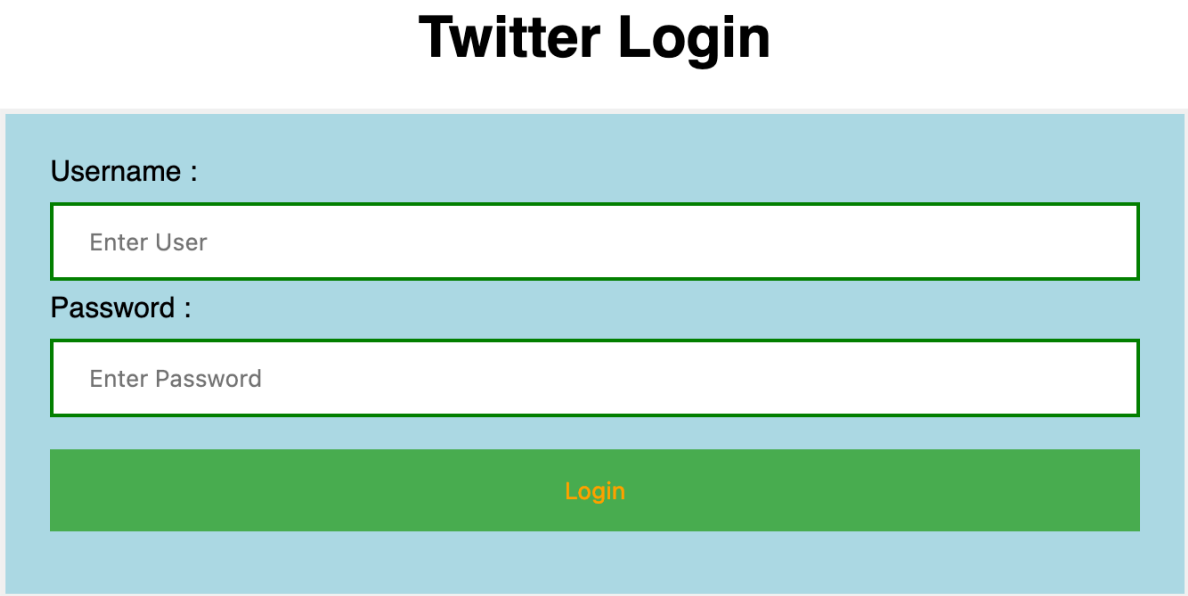
What is working

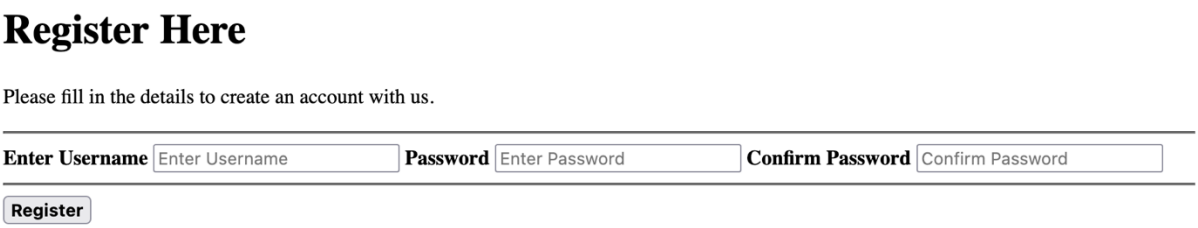
We are able establish the twitter engine and have multiple client connections to the twitter engine.

1) Setting up of CowBoy HTTP Server
2) Twitter Server and Client handler to connect to the HTTP Server
3) Interaction between different clients and server using websockets
4) Building of Application using Rebar/ Hex

Implementation Details

Twitter Engine is developed with the Cowboy HTTP Server. In order to build the erlang application, Erlang.mk is used. This utilizes rebar and hex to bootstrap the application.





Refer to html folder for HTML files

Video Link

https://youtu.be/lOC7DCHEoJw

Bonus

Implementation Design

- When a new client is registered, the clients will provide the public key using RSA-2048 to the Twitter Engine.
- A Random Number Generator in the Twitter Engine will be used to generate 256-bit values that will be used as the challenge to be sent to the twitter clients
- Using this random challenge, the client when connecting will add its own unique signature along with the current time and send it back to the Engine
- Engine checks the message by the client and authenticates by sending back a confirmation or an error

- After a successful confirmation, the engine and client will use a secret key to establish the connection between each other