

Distributed Operating Systems - Project 4 Part II

WebSocket Interface for Twitter Clone

Project Made By:

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Project Details

In this project, we implement a Web Socket Interface. We have used a JSON-based API to represent all messages and their replies. This is done by rewriting parts of the client and engine. In this, we have used the Suave framework is a lightweight nonblocking framework and helps in building scalable applications. A web-based User Interface has been created which runs on localhost at port 8080.

Functionalities Implemented

- 1) Register User
- 2) Login User
- 3) Send Tweets
- 4) Retweet
- 5) Follow Users
- 6) Send Tweets using HashTags (e.g. #COP5615 is great) and Mentions
- 7) Search User Tweets by UserId
- 8) Display all user tweets
- 9) Logout User

Steps to Run

- 1) To run the project extract the zip folder ***"Project 4 - Part II"*** and navigate to the directory where ***Program.fs*** is present
- 2) To build the project run the command ***"dotnet build"*** in the terminal
- 3) Then run the command ***"dotnet run"*** to start the server on port 8080.
- 4) Navigate to ***127.0.0.1:8080*** in the browser to perform operations

Implementation

In this, each user is assigned a different web socket and the operations are performed on the client-side with the data being sent to the respective web socket instance. The socket instance assigns the server the job of computation which uses actors to perform the tasks and the response is sent back in JSON format with messages which are then parsed and displayed on the screen. To test the application with multiple users open multiple instances on the browser and verify the output for each user on the bottom of the screen in case of all users. The index.html file has the code for the User Interface