

# DOSP Project 4 (Part 2)

## Twitter Clone - ReadMe

### Team Members

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### Video Link

<https://youtu.be/7KkW-PgsLUs>

### How to run

1. Server:

Run the file 'Server.fs' using command:

- a. ***dotnet run*** – run twitter server
- b. ***dotnet run tester*** – to see authentication messages

2. Client:

Run the file 'Client.fs' using commands:

- a. ***dotnet run user*** – run the code to use twitter
- b. ***dotnet run tester*** – additional features to see authentication messages and JSONs shared by client and server

### Brief Description

We have implemented websocket interface along with public key based authentication for the Project 4 part 2. The user functionalities provides are same as previous project, which includes login, sign up, tweet, retweet, follow, logout, view tweets, hashtags etc.

### What is working

All twitter functionalities from previous requirement.

- ✓ JSON based API to communicate between client and server
- ✓ WebSharper interface for client and server

### BONUS:

- ✓ User's 256 bit EclipticCurve public key after registration using Diffie-Helman protocol
- ✓ Challenge based algorithm:
  - ✓ 256-bit challenge
  - ✓ Client signs challenge + unix time
  - ✓ Servers confirmation/error
  - ✓ 1 second cache for challenge
- ✓ Using HMAC to sign the messages.