**Project Report**

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**What is implemented:**

Implemented the full brief.

**Part 1) Twitter Engine, which supports the following functions**

* Account Registration.
* Subscription to a user's tweets
* It allows querying tweets subscribed to.
* Tweets with specific hashtags.
* Tweets in which the user is mentioned.
* If the user is connected, we deliver the above types of tweets live (without querying)
* If user is disconnected, the server stores all the tweets for the user and delivers them when he reconnects.

**Part 2) Tester/simulator to test the engine**

* Each Client can:
  + Send tweet. Tweets can have hashtags (e.g. #COP5615isgreat) and mentions (@bestuser)
  + Re-tweets (so that your subscribers get an interesting tweet you got by other means)
  + Query for mentions, hastags or tweets subscribed to.
* We simulated periods of live connection and disconnection for random users

**Part 3) Zip-f distribution**

The program (client simulator) takes the minimum number of activities as input. Based on the input, the most subscribed to users (Users with a higher rank) set the minimum number of activities they need to do using the following:

**Zip-f version 1:**

* Top 1% of the clients do at least 20 times the minumum activities.
* Next 9% of the clients do at least 10 times the minumum activities.
* Next 50% of the clients do at least 2 times the minumum activities.
* Rest 40% of the clients do at least the minumum activities**.**

**Other considerations:**

**NOTE: The Client simulator and server are two different processes. These can be on the same or different machines on the same local network but they must get the correct IP address from the init.getif() system call.**

**We assume that:**

The first address returned by the init.getif() system call is corrent. If the first IP address returned is not the address of the machine on the local network, no node can be named correctly. Hence nodes can’t connect.

**Performance measures**







