**Project 4.1  
 Twitter Engine**

**Group Members-**

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**Steps to execute the program-**

Extract the project directory and open the project directory using command line and run the command- **mix run proj4.exs num\_user num\_msg**

where,

num\_user: Number of Users

num\_msg: Number of messages each user should tweet

**What is working-**

The basic functionalities of Twitter like create and delete account, login, send tweets, retweet, follow user, check trending hashtags and check mentioned tweets have been implemented in the project. We have tested the engine with different test cases for different functionalities as specified in this document.

**Functionalities Implemented-**

* **Register account:** Makes an actor for that user and adds the user to the user table.
* **Send Tweet:** Each user posts num\_msg number of tweets on their newsfeed which get added to the tweet table across their id.
* **Delete account:** Deletes the user from the all the tables and removes the tweets from other user’s newsfeed.
* **Subscribe:** This allows any user to follow some other user in the network and thus adding the respected users to follower and following tables.
* **Re-tweets:** Enables user to share the tweet of any user they are following so that that tweet is visible to his/her followers.
* **Hashtags:** Used to keep the track of hashtags being used by user and thus allowing to retrieve the most trending hashtag.
* **Mentions:** This functionality allows user to mention some other user in the tweet which makes sure that the tagged user also get to see the tweet in which he/she is mentioned.
* **Active users:** Keeps track of all the live users which are currently in session so that any activity performed by them is propagated to respective entities.

**How to run Test cases-**

* All test cases can be run together using **mix test.**
* If you want to run a specific test case then simply write the following command:

**mix test test/Twitter\_test.exs:line\_number** (line number is the line number of the start of specific test case in the file Twitter\_test.exs)

**Test Cases-**

* **Create user**: creates a user [line-14]
* **Create duplicate user**: prevents creating same user [line-22]
* **Delete user**: deletes a user [line-30]
* **Send tweet with hashtag**: whenever a tweet is sent with hashtag it parses the tweets and stores the hashtag in hashtag table [line-43]
* **Send tweet without hashtag:** demonstrates a case of sending a tweet without hashtag [line-50]
* **Send tweet with mention**: sends a tweet mentioning some other user and notifies the respective user. [line-60]
* **Follow user (3 cases):** Allows user to follow another user [line- 70,80,90]
* **Retweet (3 cases**): Allows user to retweets his/her following’s tweet so that his/her followers can see the tweet. [line-100,108,116]
* **Check the most trending hashtag:** Returns the most running hashtag. [line-124]
* **Check if hashtag exists:** Asserts whether hashtag actually exists [line- 132]

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