

README

Team Members

Winter Galyon III

Joseph Lukemire

Jason Palmer

Division of Work

We split the assignment into three different parts. Winter was responsible for the server/client setup (multithreading, adding new checks, etc.). Joseph was involved in the tweet, timeline, gettweets methods, as well as the global data structures. Jason was involved in the subscribe, unsubscribe, and getuser functionality. We all worked together on testing and debugging.

High Level Description

An underlying theme for the whole implementation is using flags at the beginning of any communication to or from the server. We utilized lots of different hash table data structures for quick lookup of information like subscribers to a hashtag. To keep timelines in order we used a list. To deal with blocking for user input, the client always opens two threads: one for listening for messages from the server, and another engaged in a loop collecting user input. We felt like the biggest challenge in the project was remembering to update each of the global data structures appropriately. For example, forgetting to remove a user from the key set of the user_subs mapping could lead to any future client with the same name not being able to connect.