Design Doc

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Design Components:
- Routing Server
  - Passes available server hostname and port to clients
  - Monitors for bad connections and crashed servers
  - Reroutes clients when issues occur
  - Uses the custom RoutingService GRPC service

- Master servers
  - Connects to routing server when started
  - Master server facilitates the execution of client commands
  - Passes timeline information between followed users
  - Built on the original SNS GRPC service from homework 2
  - Similar functionality to homework 2
  - Uses bully algorithm to elect the available server when the original available master crashes
  - Elections are initialized by whatever process runs into an error first, whether it be the client, the routing service, or other master servers
  - A shared VirtualBox folder library is used to create a centralized database for user data including follower information and message/timeline history

- Slave servers
  - Started by forking the original master process
  - Monitors the master process ID
  - If the master crashes, the slave will fork itself to reinitialize a new master and slave