Project 4 - Report

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What is working:

A client/server application that simulates Facebook APIs (Page, Posts, Friend Lists, Profile, Photos and Albums).

Implementation Details:

Server Side:

A directive spray can router is used on the server side which routes requests for every service. HTTP requests that are made by the client are received by the spray can server which then triggers a new actor for every request. Page, Posts, Profile, Friend List, Profile, Albums and Photos are services that we implemented. For each of these service, we have created actors which handle the appropriate requests. We maintain a KeyValue Store which contains TrieMaps which store information required by the services.

Client Side:

The simulated client generates requests for about 1000 users(including pages and profiles). It is assumed that users are active all the time. For client implementation, every user is an actor and we use a tick for each service such as post, photo and album. At each tick a service request is generated and assigned to an actor.

The number of get and put requests per second are distributed among the three services as follows: 75% for photos, 21% for posts and 4% for albums.

Number of users:	**1000**
Number of profiles:	980
Number of pages:	20
Post Requests per second:	**200**
Number of photos:	150

Number of posts:	42
Number of albums:	8
Get Requests per second:	**2000**
Number of photos:	**1500**
Number of posts:	**420**
Number of albums:	**80**

Run Instructions:

After sbt,
Select Main Class HTTPServer First, then run Main Class HTTPClient.
HTTPServer prints the number of requests.