**CS 30700**

**Design Outline**

**Team 14**

Ryan Klinedinst

Baxter Govan

Steve Eisner

Victor Pan

Connor Brown

Hunter David

Design Issues

Functional Issues

1. How do we handle a large number of server requests that flood in at one time?

Solutions:

* Use threading depending on what type of request is being made.
* Use Static pages and page objects on the client side that fill in with data that the server sends. Only display a certain amount of microblog posts for each person’s timeline at first then give them the option to load more by scrolling down.
* Load and deload microblog posts based on whether they can be seen or not on the client side.

Non-Functional Issues

1. Which hosting service should we use?

* Option1: AWS
* Option2: Google Cloud
* Option3: Azure

Choice: AWS

Justification: We will host our server using AWS. A benefit of hosting with AWS is that it gives our application increased scalability. Our team members are also well versed in using AWS.

1. What backend should we use?

* Option1: Spring Boot (Java)
* Option 2: PHP
* Option 3: Node.js (JavaScript)

Choice: Spring Boot (Java)

Justification: Our team members are all familiar with Java and we want to use Spring Boot because it will reduce development, unit test and integration test time. As well as the fact that it is easy to develop production ready web applications very easily using Spring Boot.

1. Which frontend framework should we use?

* Option1: React JS
* Option2: Bootstrap
* Option3: Angular

Choice: Combination of React and Bootstrap

Justification: React can be used as a base in the development of single-page web apps, as it is optimal for fetching rapidly changing data that needs to be recorded.

1. Which database should we use?

* Option1: MySQL
* Option2: SQLite
* Option3: MongoDB
* Option4: Oracle XE

Choice: MySQL

Justification: MySQL focuses on ease-of-use and efficiency makes it an attractive

solution for our needs. It’s also free and open source and has many tutorials and guides so learning and working with it will be very easy.

Design Details