Software Implementation and Testing Document

For

Group 11

Version 1.0

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1. Programming Languages (5 points)

List the programming languages use in your project, where you use them (what components of your project) and your reason for choosing them (whatever that may be).

We used React Native with TypeScript instead of JavaScript to build the Front-End component. For the database we are using Firebase, and we are not currently using a dedicated back-end framework.

2. Platforms, APIs, Databases, and other technologies used (5 points)

List all the platforms, APIs, Databases, and any other technologies you use in your project and where you use them (in what components of your project).

We are currently using the React-Native, along with its associated API Navigator in order to move fluidly through pages and send different information between components. For the database we are using Firebase to easily handle database interaction as well as allow for high scalability.

3. Execution-based Functional Testing (10 points)

*Describe how/if you performed functional testing for your project (i.e., tested for the **functional requirements** listed in your RD).*

We have tested the login and register pages with our database to make sure that it takes in the correct parameters and only shows the user the homepage if a user's information has been authenticated by the database. Each user story is interactable with a functioning like button. Clicking on a user story expands them and takes the user to a new page. The team can create new posts, adding these user stories to the feed. Showing accurate information for user stories was tested by interacting with the story across different pages and verifying that modified changes to posts like likes are reflected throughout our project.

4. Execution-based Non-Functional Testing (10 points)

*Describe how/if you performed non-functional testing for your project (i.e., tested for the **non-functional requirements** listed in your RD).*

We have tested the speed of writing to the cloud database and have determined it is very fast at around 100 milliseconds. We have also tested increasing the latency between the user inputting text into a form and the overall application and have been able to reduce by about 20% since the initial implementation. We have also implemented testing for the security of an account by testing the FireBase cloud against inputting a very easy password such as 123 and confirmed it won't allow you to make an account with those types of parameters.

5. Non-Execution-based Testing (10 points)

Describe how/if you performed non-execution-based testing (such as code reviews/inspections/walkthroughs).

John has personally talked with the team multiple times as to how everything works and how I implemented each component of the front-end. John have explained how to download the repository and all the dependencies. In addition, John explained how to create basic components and have left them pages to create, style, and test to their hearts content. Wilfredo has done code reviews and walkthroughs with members of the group primarily pertaining to database functionality and a bit of how data is moved throughout the project. Mark has done the same regarding the geolocation functionality and how it is integrated into the database, and how the data is used in different parts of the project. The entire team has worked through code together to add comments, as well as discuss new features and issues that need to be resolved.