THOMPSON RIVERS UNIVERSITY

SENG 3210 – Applied Software Engineering

ANDROID VOTING APP

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February 16, 2024

Initial Brainstorming Outcome

Initial Functional and Non-functional Requirements

Functional Requirements:

User Registration and Login:

- Users should be able to create accounts securely.
- Users should be able to log in using their credentials.

Poll Creation:

- Administrators should have the ability to create new polls with defined topics.
- Polls should include a title, description, and options for voting.

Poll Voting:

- Registered users should be able to vote on existing polls.
- Each user should be allowed to vote only once per poll.

Real-time Dashboard:

- Administrators should have access to a dashboard displaying real-time statistics of poll results.
- Dashboard should provide information such as total votes, vote distribution, and trending polls.

Mobile Responsiveness:

- The application should be optimized for all mobile devices to provide a quality user experience across different screen sizes.

Non-functional Requirements:

Performance:

- The application should load quickly and respond to user interactions without noticeable delays.
- Database queries and data retrieval should be efficient to minimize loading times.

Security:

- User data should be encrypted to protect sensitive information.
- Authentication mechanisms should be robust to prevent unauthorized access.

Modifiability:

- The application should be designed using modular and extensible architecture to accommodate future updates and enhancements.
- Changes to functionalities or database schema should be implemented with minimal disruption to the existing system.

Compatibility:

- The application should be compatible with Android devices of all sizes and recent software updates.

Module Ideas

Log In:

- The Log In module allows users to authenticate and access their accounts securely. Users will enter their credentials (username/email and password) to log in to the application. This module verifies the user's identity and allows access to the app's features based on their role (user or administrator).

Create an Account:

- The Create an Account module enables new users to register for the application. Users will provide necessary information such as username, email, and password to create their accounts. This module ensures secure account creation and could possibly include features like password strength validation and email verification.

Dashboard:

- The Dashboard module serves as the main interface for users and administrators to access essential information and features of the application. For users, the dashboard may display relevant polls and voting options. Administrators will have access to additional functionalities such as poll management.

Poll Management (Admin):

- The Poll Management module empowers administrators to create, edit, and delete polls within the application. Administrators can define poll topics, descriptions, and voting options. This module ensures that administrators have full control over the creation and management of polls to engage users effectively.

Poll Voting (User):

- The Poll Voting module allows registered users to participate in polls by casting their votes. Users can view available polls and select their preferred options. This module ensures a friendly voting experience for users and provides real-time feedback on their choice.

Real-time Statistics (Admin):

- The Real-time Statistics module provides administrators with statistics regarding poll activities within the application. Administrators can view real-time updates on total votes, vote distribution, and more. This module assists administrators in making informed decisions and viewing user engagement.

User Profile:

- The User Profile module enables users to view and manage their profile information within the application. Users can update their personal details, change passwords, and customize preferences. This module ensures a personalized experience for users.

Database Schema

User Table:

- user_id (Primary Key)
- username
- email
- password
- role

Poll Table:

- poll_id (Primary Key)
- title
- description
- creator_id (Foreign Key referencing user_id)
- date_created
- options

Vote Table:

- vote_id (Primary Key)
- poll_id (Foreign Key referencing poll_id)
- user_id (Foreign Key referencing user_id)
- voted_option

First Meeting Minutes

Meeting 1

Time: February 16, 2024, 11:00 am to 1:00 pm

Agenda: Distribution of Project Tasks and brainstorming

Team Member	Previous Task	Completion State	Next Task
Ruth Befikadu	N/A	100%	Code main voting screen
Ryan Martin	N/A	100%	Create backend code to enable users to add a voting option
Shaylee Broadfoot	N/A	100%	Code main login screen to the app

Decisions Made:

- Team members will look into the feasibility of implementing a cloud based database and researched the best option to be Firebase Realtime Database

- The app will integrate SQLite as the local database for things that do not require syncing across devices.
- The rough schema of the desired database.
- The desired modules that the app should have.

Task Distribution:

Ruth Befikadu:

- *Task Completed:* Ruth's initial task was to create the connection between Android Studio and Github.
- Next Task: Ruth's next task is to design and implement the poll voting module for users. This screen will be the one the user uses to vote. It will consist of a topic to vote on and at least four options to select.

Ryan Martin:

- *Task Completed:* Ryan's initial task was to set up a meeting time, make sure all parties attended and to go over initial tasks and the next steps towards project completion.
- *Next Task:* Ryan's next task is to create the backend code for the administrator to add an option to vote on. This will consist of an administrator selecting the "add voting option" option which will add a cell to the screen that they can type into.

Shaylee Broadfoot:

- *Task Completed:* Shaylee's initial task was to create the GitHub repository.
- *Next Task:* Shaylee's next step is to implement the user registration and login functionality. This will include inputs for user details including role selection (admin or not), and submission.