CS 4720 - F17 - Final Project Proposal

Device Name: Samsung Galaxy S8+ Platform: iOS

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App Name: WUVA News

Project Description:

We created an app for WUVA news. As CavDaily slacks with real-time content and newer forms of media like video, WUVA (traditionally a radio station) is gaining in popularity. While they have a nice website, it does not scale well for mobile usage. By implementing a nice UI with large images and article previews, we believe we made the experience much richer and more engaging. In addition, users can save their favorite articles, sync articles for offline reading, and report events that happen near them in real time.

Our app does the following:

- The system shall allow users to view current articles and videos in a few different layout styles, according to preferences and device orientation
- The system will allow users to save articles.
- The system will cache articles for offline reading.
- The system shall open articles in a “reading mode,” with images loading inline.
- The system shall implement dark theme and light theme options.
- The system shall use the intent system to open videos in the user's player of choice
- The system shall have a reporting form for emergency events where they can mark their location and describe what occurred.

We incorporated the following features:

- GPS – User will be able to report an event that happens in their location.
- Device Shake – User can report bugs by shaking the device on any screen.
- Consume a pre-built web service – Our app will consume WUVA API and load articles from the site.
- Data storage with SQLite – Will be used for storing article data for offline reading.
- Open shared activity/features – The app will open YouTube and Facebook videos and allow for sharing articles to social media.

Wireframe Description:

Our wireframe shows our layout for our app. After the launch screen, there is a main screen with card views displaying articles. By clicking on the card view, you can open a reading mode for the article. There is a menu if you swipe right that allows you to navigate to a “Report Event” screen, a “Saved Articles” screen, and a “Settings” screen. The reporting screen contains a Google Map view and text boxes that you can fill in to describe an emergency event. The saved articles screen contains the filtered articles you have saved. And lastly, the settings screen lets you select your viewing preferences. If you shake the device on any activity, you will be prompted by an alert dialog asking whether you would like to report a bug. If you say yes, you will be taken to a “Feedback” screen where you can send feedback about the app to the developers.

Platform Justification:

One of the benefits of Android programming was the ability to manually write in all of the links between the code. A frustrating part of the iOS project was things refusing to work when we dragged and dropped them, but having no way to fix the issue or try a different approach. With Android, there are so many different ways of coding the same thing so it gave us a lot of flexibility.

In addition, customizing themes and logos was also a lot easier on Android. While iOS seems to come with a set library of design aspects, Android’s flexibility allows for a wide array of color and theme choices, which gave our app uniqueness.

Lastly, as a news app, we want our app to be accessible for the majority of people. Android’s have the highest percentage of mobile users, so coding on an Android platform would allow us to reach a wider consumer base.

Major Features/Screens:

MainActivity: Shows all the articles in Card Views and can be scrolled through. You can tap on an article to read it in a reader mode.
MapsActivity: You can make a report about something occured near you, including suspicious activity, crimes, or general alerts.
BugActivity: You can report any bugs noticed in the software to the developers through this form.

Optional Features:

15 pts GPS/Location Awareness: If you swipe to the right, in the Navigation bar, there is a button that leads to a report event page. This includes a Google Maps API that shows your location on a map and sends that information with the report.

10 pts Device Shake: If you shake the device on any screen, a dialog box will pop up asking if you would like to report any bugs in the app. Pressing on this will then lead you to a feedback page where you can email the developers.
10 pts Consume a pre-built web service: Our home page gets data from the WUVA website and displays the multiple articles in a CardView for the viewer.
20 pts Data storage using SQLite: Our app stores the articles in SQLite for offline reading.
5 pts Open shared activity: Both report pages open up the email app to send a message to the developers. The main page also allows users to share articles in social media.

This totals 60 pts.

Testing Methodologies:

We did a lot of manual testing, where one person would write code and then the other would test that bit of code thoroughly to search for issues. We would also write code in small chunks so that we could test it with all the previous code before adding more. This way, we didn't write extremely long chunks of code and waste time because there was a conflict that emerged.

Usage:

No special information needed.

Lessons Learned:

We learned how to work with fragments because we had not used that for any of the previous projects. We learned the struggle of getting a nice looking design for the UI that also functions correctly programmatically. One of the most frustrating things about this project was looking up how to write specific code online, only to find out that those functions had depreciated or changed in the past year and would not work for our code.

We also changed our idea for the project a lot over the course of coding it, so perhaps we would have benefited from planning it out better. Although we created a wireframe, it was quite rushed and we didn't thoroughly think about all the parts of the app we were building and how they would work together. We would have benefitted from starting this planning process a little further in advance.