PollUp™ Project Plan

Version 1.0
CPR E 491

Team Members:

Neil Saigal

Team Advisor:

Dr. Ponpandi

Property of PollUp Solutions Inc.

Table of Contents

1) Introduction **Page 3**

i) Project Statement

ii) Purpose

iii) Intended Audience

iv) Goals

2) Deliverables **Page 4**

3) Design **Page 5-10**

i) Previous Work

ii) Design Considerations

iii) System Block Design

iv) Wireframe

4) Requirements **Page 11-12**

i) Functional

ii) Non-functional

iii) Standards

5) Challenges **Page 13**

6) Timeline **Page 14**

i) First Semester

ii) Second Semester

7) Conclusion **Page 15**

Introduction

Project Statement

PollUp™ is a small tech startup aimed to increase communication between the manager and the employee. We strive to be a lightweight, multi-platform, feedback tool for small businesses to be able to integrate very easily into their systems. I have been working on this startup for the past year with two MIS students at Iowa State University. We are finishing up development on a Web application and iOS application. In order to become fully multi-platform we are adding an Android version. The scope of this senior design will include the development of the Android app and maintenance of the iOS app.

Purpose

Surveys can often be tedious and mundane to fill out accurately. PollUp's purpose is to eradicate the need for end of the year surveys and replace them with frequent one-question polls in the workplace. We offer flexible polling so that responders can feel free to express their opinions of anything happening in the workplace.

Intended Audience

This product is aimed at small businesses who want to get steady, honest feedback from their employees. PollUp intends to be a virtual assistance to HR managers who want to know the state of their company's morale, fix an inhibiting issue in the workplace, or just get feedback from employees. Eventually, PollUp will branch out to offer services for larger businesses, universities, and small clubs/organizations.

Goals

The goals of this project are defined by two main deliverables. During the senior design two semesters, we will have submitted an iOS to the app store and will be constantly maintaining it. At the same time, we will have finished development on the Android application and will have hopefully submitted it to the app store. Some stretch goals will be adding Slack integration for PollUp™ and Intercom chat box implementation. Another stretch goal includes being able to export the results of the polls to various formats (PDF, PNG, Excel).

Deliverables

iOS Application for PollUp™

The submission of the app to the iOS app store. Also, maintaining the iOS application to perform any updates to the UI or functionality as per our clients' requests.

Android Application for PollUp™

The development and submission of the Android app to the Google Play store. Maintenance of the Android app.

Slack Integration

Integration into Slack and other popular software

Design

Previous Work/Research

There are a few other companies like PollUp™ on the market today. Survey Monkey is our main competitor. However, they do not offer the flexibility of polling as PollUp™. We offer repeating (automating) polling, free response, anonymous responses, and multiple-choice polls. Another company is TinyPulse. They offer similar polling features as we do. However, we have more of a human resources purpose, as we offer previously created polling templates for HR managers to use.

To design these polling templates, we have been working with the Iowa State psychology department and multiple local HR managers. This research is ongoing and we want to become more and more relevant to HR to help small businesses get an accurate feel of their employee satisfaction.

Design Considerations

Tab bar vs Hamburger menu

We decided to stick with the trend and implement a hamburger bar in Android like most Android applications. On the contrary, the iOS PollUp application features a tab bar navigation. This allows faster navigation but its shortcomings include only room for 4 or 5 max tabs. Hamburger menus add extra flexibility to the user experience.

iOS vs Android

For a polling software, a multi-platform experience is essential. As the iOS is nearing completion for this app, we decided to also develop a **native** Android application for the Google app store.

Lost connectivity

Mobile phones lose connection all the time, code for this appropriately.

Auto login

Do not require user to log in every time, perhaps auto login by saving user credential in device keychain.

Background threads

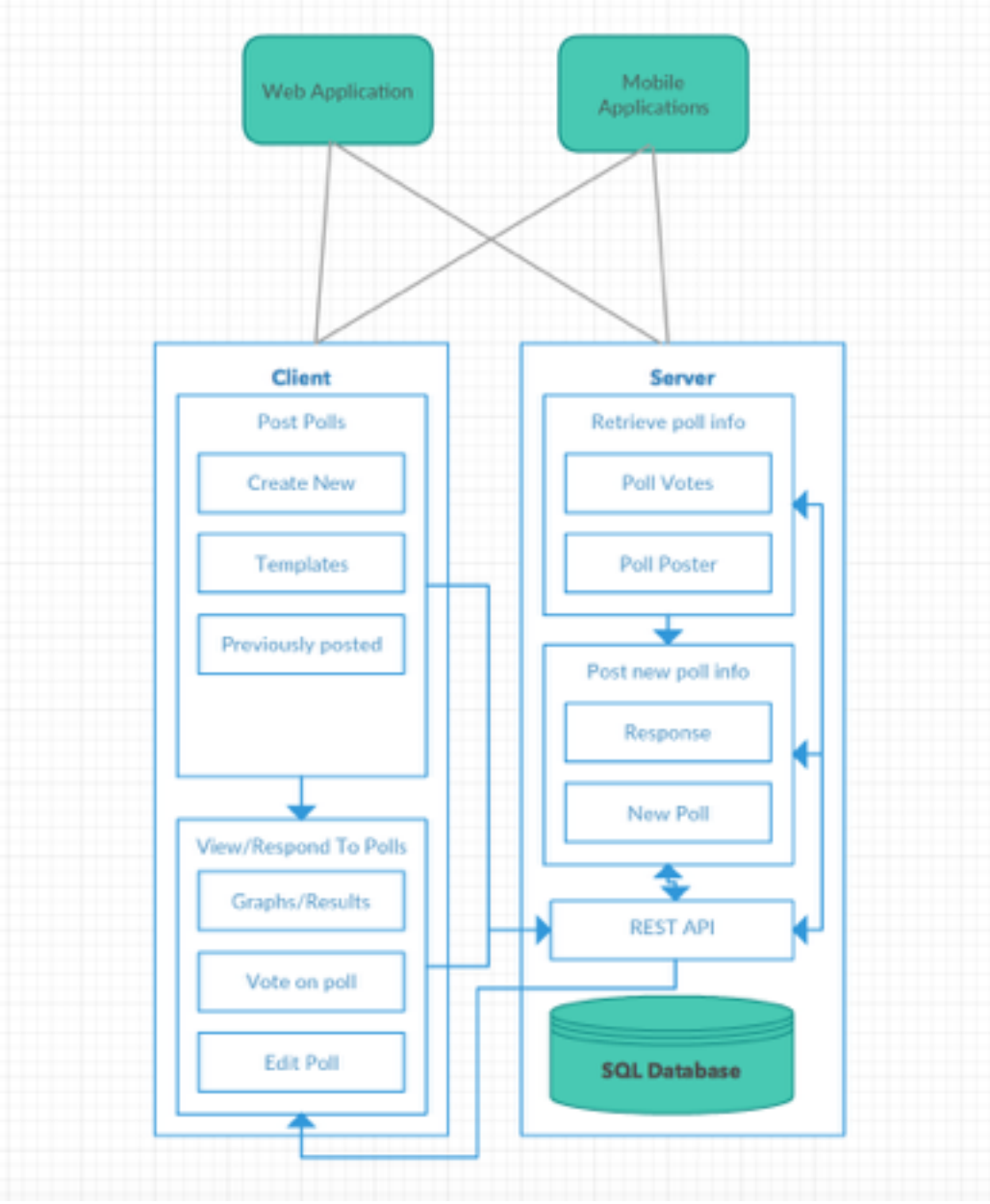
As we are constantly pulling data from APIs, we need to enable use of background threads to ensure we do not block up the main UI thread and slow app performance. The Android phone is thin on resources and it has to be shared between all the apps.

Versions to support

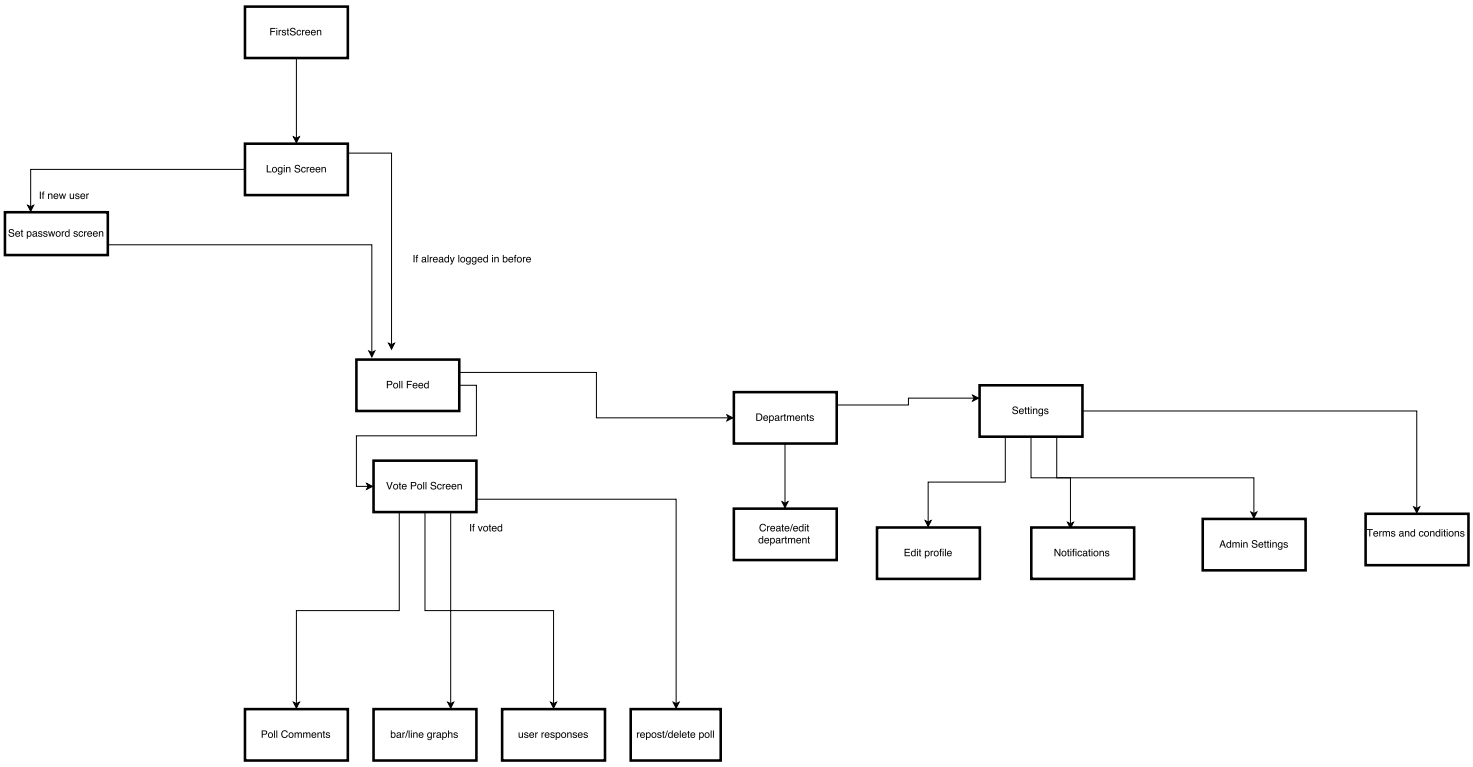
Android OS versions are frequently updated. At any time, expect your target user base to be spread across at least 3 different OS versions.

System Block Design

This diagram outlines how the client and server interacts with our software. The mobile application uses a REST API to communicate with the SQL database.

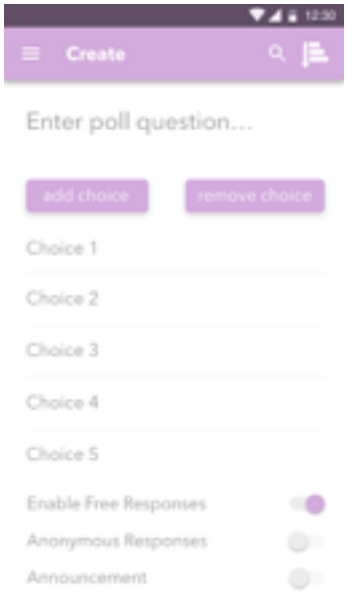


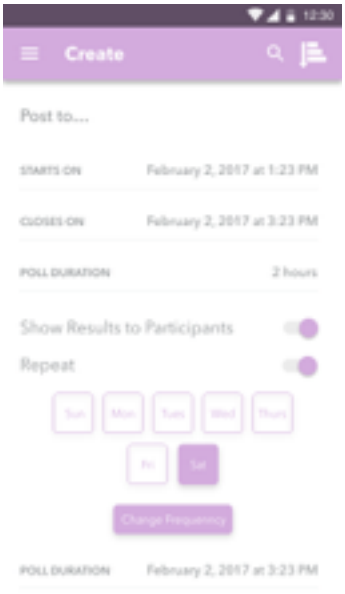
The screen flow outlines how a user can navigate through the application. This outline shows most of the screens in the application and its segues to other screens.

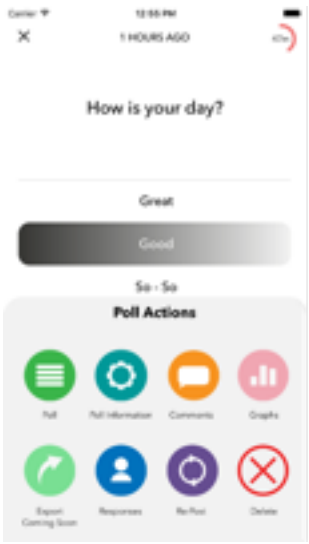


Wireframe

This wireframe will include screenshots of the application for creating a poll and the viewing the results of the poll.







Software Requirements

Functional

Admin must be able to register company

One user must be able to register new company to use PollUp. Sign up requires logging of billing info, signing up users to company, customizing color of company.

User must be able to to log in

Once a user is assigned a company, a temporary password is sent to their email. The first time the user logs in, they are able to change passwords, update profile pictures, and add their job title.

User is able to post polls

User will be able to post polls to specific departments in the company. These polls can be anonymous, multiple choice, free response, or repeating (automated reposting). A user cannot vote on their own posted polls.

User is able to vote on polls

A user will be able to vote on polls that they didn't post. After voting, they are enabled to comment on the poll, view the results through a bar graph or line graph (repeating polls), or see other voters' responses.

User is able to change profile details

User must be able to change their name, picture, or job title in the app.

User is able to be put in a department

Departments are the groups the users are put in. They can be in more than one department at once. They will only receive polls that are posted to the departments they are in.

User is able to create/edit departments

Users will be able to create a new department and add users to that department. They will also be able to edit a pre-existing department's name and add/remove users to that department.

Non-functional

Data encryption

All companies' secure data will be encrypted in the database with 124 bit encryption.

Database Scalability

The MySQL database will be able to handle a large amount of users and adapt quickly to an increase in users.

User is able to access data on any platform

Web app, iOS, and Android versions of PollUp must all access the same SQL database to ensure consistency across all platforms.

Standards

As we are trying to keep everything very professional and documented for our startup, this project will follow suit. The code will be up to IEEE standards and ethics and everything will be properly documented.

Challenges

PollUp™ will present some challenges for our team. For one, I am the only person working on development for this project. I am working with two other MIS students on the startup, but they are only concerned with the business/management side of things. Two mobile applications will be a large amount of development work, along with the required write-ups/ reports.

Another challenge will be the calibration between new development and maintaining old development. Since I am working this project as part of a startup, there will be changes and updates needed to be made to the existing project to keep with customer demands. This means that the proposed end project will constantly be changing.

This project is feasible for me to complete in the allotted time, however, I may need to add a developer to the team.

Timeline

First Semester

Finish iOS and submit to the App Store
Close to finish development on the Android app

Second Semester

Finish Android app and submit to App Store
Maintain both mobile apps

Conclusion

I'm very excited about the opportunity to work on PollUp™ as part of my senior design project. We will be able to make significant progress on our development. We are planning on launching our product at the end of this month. It will nice to see the fruits of our labor when companies start using our project. I believe I will be learning professional development techniques through the 491 course. My advisor, Dr. Ponpandi, is very supportive and a great reference for me to ask any questions regarding the Android application.