Software Design Document
Student Recreation Center Mobile App

Team Members

Name	Task
Ryan LaFrence	Google Sign-In, Authentication, GUI Implementation
Dillon Simion	MySQL, Database/Connection, Calendar-To-Database Conversion/Update Applet, RMI WebServer, & GUI Design Overseer
Vincent Boyd	Google Calendar Code Interface, Android Development

All members are tasked with integration of the three sections of the application.

1 Introduction

This introduction provides an overview of the student recreation Center Mobile App. This includes Scope and target audience.

Document Scope and Purpose

This document provides a description of the technical design for the Student Recreation Center Mobile App. The purpose of this document will describe the technical details of the App. This document provides an overview of the different functions of the app.

Document Scope and Purpose

This document is targeted to technical staff
- Development Team
- IT
- Support Staff

System Development
- Development: Android Studio, Eclipse (Database Side)
- Database: MySQL
- Server: Most Likely windows but could be a Linux Server.

Design Approach

The design approach used here is a modular approach where each team member can work on separate segments of the program; with an interface to be able to plug everything together near the end of development. Although this approach cannot be exactly followed, it is the core method that is being used during development.

Data Flow

The Rec Center App will comminicate using Java ODBC to a MySQL server at the Rec Center, and will use this database to manage and keep track of the users and the events at the Rec Center. Google Calendar will be used in conjunction with the app to manage the events, and will be updated alongside the database so that app users will be able to search for events.
Events will be added via the app to the google calendar, and the database will keep track of this.

UI Design

The UI design is created by code inside of Android Studio. The code can easily be changed or modified to allow quick and easy changes to the UI design. This helps the UI to communicate with the actual code.

Screenshots of the Interface
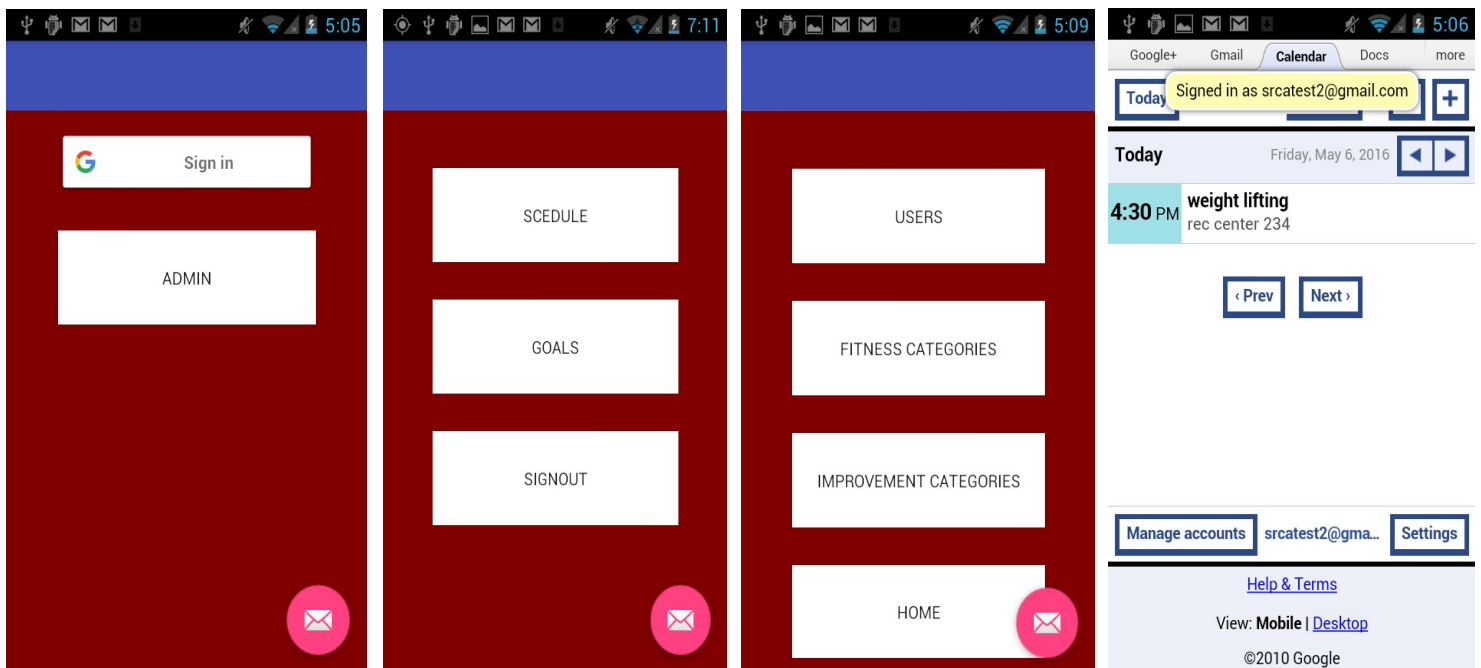
2 Modules

Search

The search will be used to collect data from the database about the calendar and different users. This data will be the on screen data the users can see.

Security

Users and Permissions

The app will consist of 4 different users. The hierarchal of the users is split between Admin and Public. Public users are able to use a Google Account to sign in to the app (database user records are automatically created) and this allows them access to event search functionality as well as the ability to track personal goals and register for event notifications.

There is only one administrator account, and its own special Admin App has a special access key which enables the use of administrator functionality for the Rec Center to use to manage the database and run management tasks.

The Public users are limited by MySQL only allowing them to run predefined stored procedures, which then restrict the functionality available to them from the web. This security mechanism means that the only needs to be one MySQL account to cover for all Public users. Administrators, on the other hand, do not require a Google Account to manage the database; they just require access to the Adminstrator App functionality.

3 Use/Flow Graphs Regarding the *Rec Center App:*

STRUCTURE OF APP COMMUNICATION
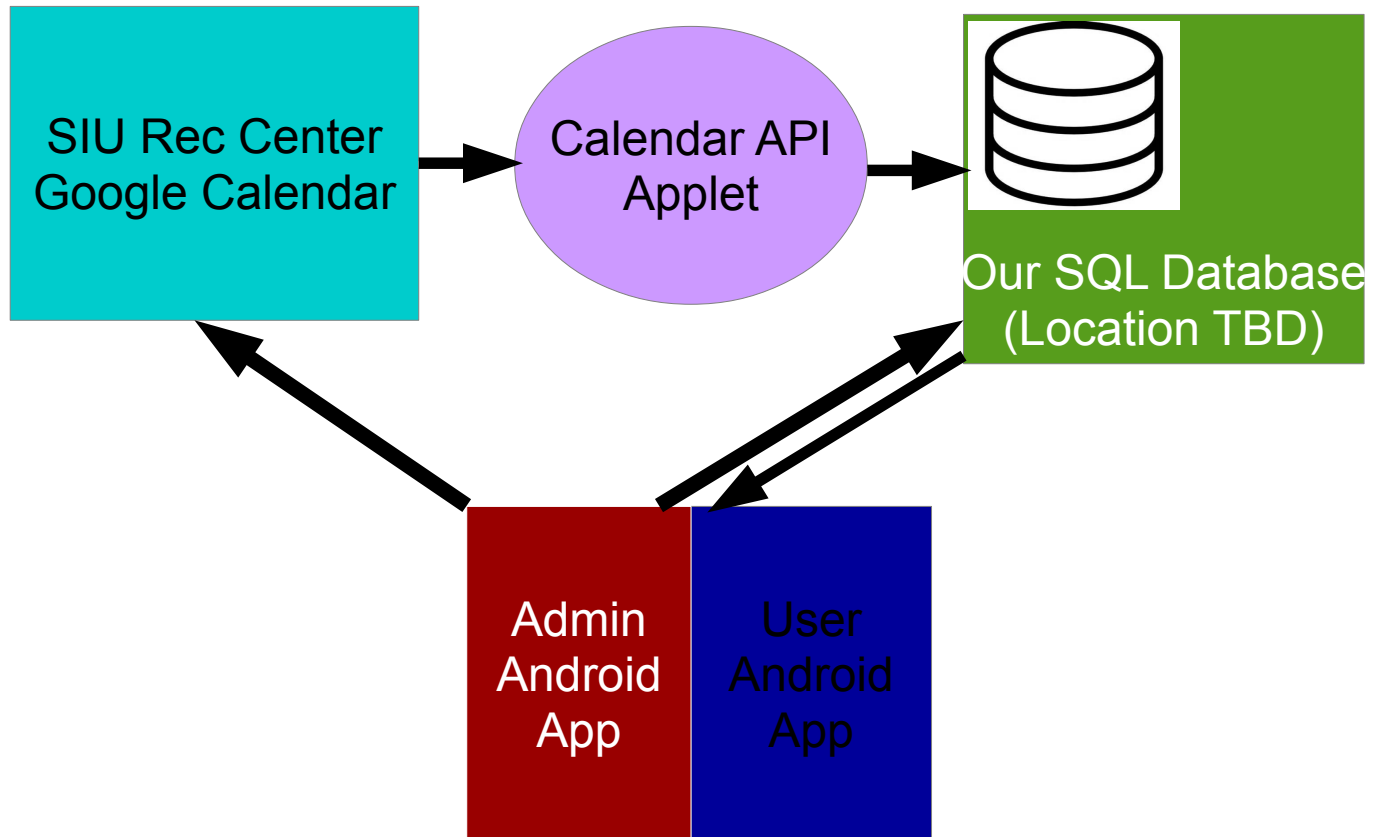
COMMUNICATION BETWEEN Android AND [JDBC <------> MySQL] WEBSERVER