

**EPICS**

**Brain Project**

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**Dossier**

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### **Abstract**

This project aims to create a mobile application for both the Android and iOS platforms. Its purpose is to connect users to the art exhibit from the Brain Project during the future Butler ArtsFest. Users will be engaged in information about the artists, their works, and by an educational game while utilizing iBeacons to streamline the receiving of this content based on their location.

### **Objective**

The objective of this project was to create a mobile app that would allow the end user to see the artists and brains that will be displayed for ArtsFest. Additional goals were to create an interactive game and get iBeacon functionality working based on proximity to a specific brain.

## **iOS Mobile App**

### **Implementation and Design**

The structure of the app is based largely around three primary views which can be cycled by swiping left or right from the current screen. Each of these will have a purpose – be it a game, information on artists or the brains, or other information. Learning to utilize this was something that was new to all team members, so some investigation and trial-and-error was necessary to work it out. There is also a similarly structured menu on the far left side, which will allow for quick and easy navigation to desired information or sections of the app. Included in the current structure are alert/pop-up windows in the login screen to allow for registration and social media integration, and within the app there are several view controllers focusing on providing detailed information on artists, their work, and the lessons that each of them hope to teach. Most of the app is currently populated with dummy data, as a large part of our future plans involves the acquisition of the data that the client wants. Throughout the process, our vision matched or exceeded that of the clients, and as such we have been able to move relatively freely in terms of our direction.

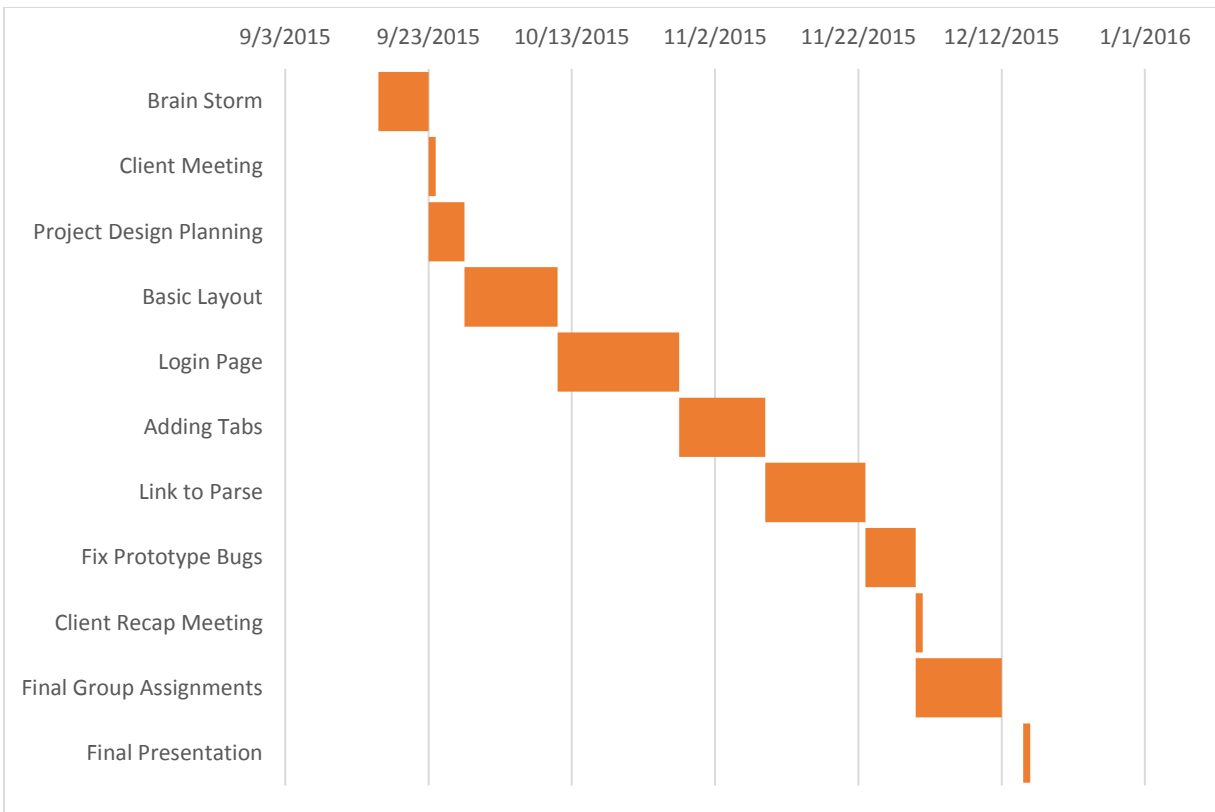


Figure 1.0 Gantt Chart

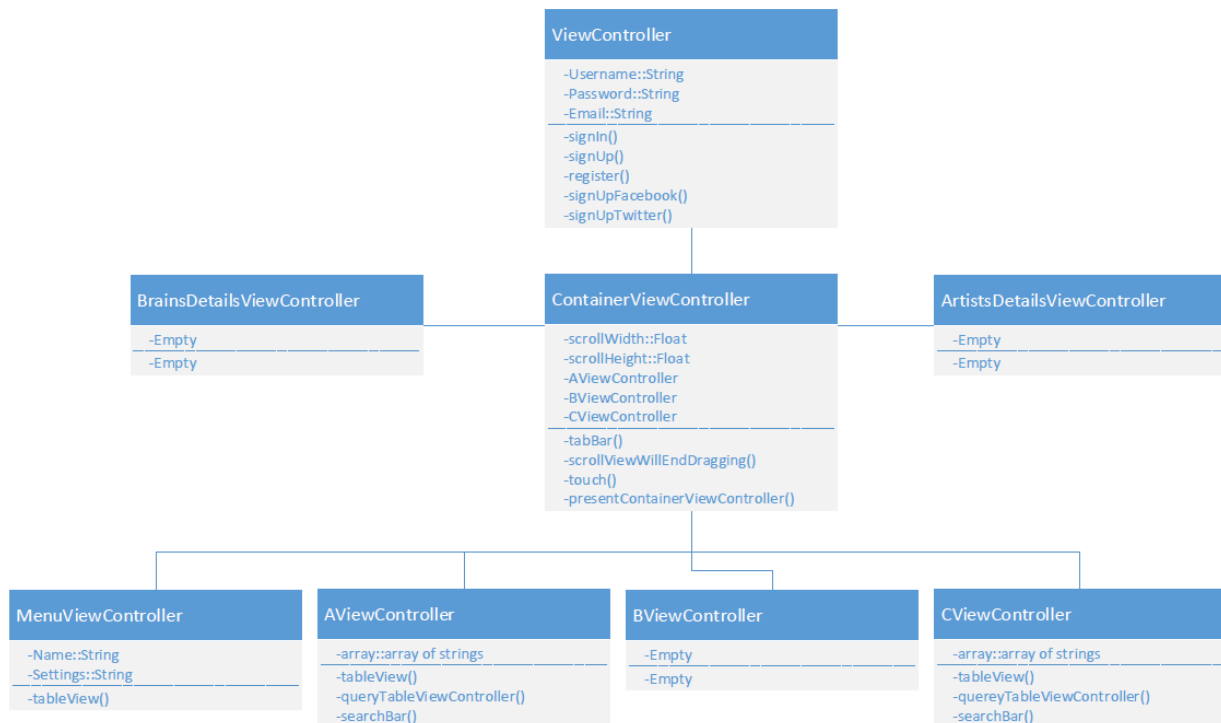


Figure 1.1 Class Diagram

## **Functionality**

The iOS app will take the user to the login page when first opened. From there the user has the option to create an account or login using Facebook. Once logged in, the user will see three tabs at the bottom that correspond to “Home”, “Brains”, and “Artists” respectively. The user is able to swipe between screens in order to see what will be displayed on each screen.

## **Future Work**

A large portion of the future focus of our half of the project revolves around content. Now that the framework for the app has been laid out, we hope to implement the more interactive parts of it, including a game, information on the artists and their work, and other educational elements to make the app exactly what the client and our team dream it to be. The focus will be on finding or generating this content, and working with the design of the xib files and view controllers which encompass these parts of the app. A large part of our future plan is finding a time to travel to Bloomington to meet the client, so that we can get a better handle on the project itself and get to know the person who started it all.

## Android Mobile App

### Implementation and Design

The structure of the project implements a 2-Tier Architecture. The boundary classes, where users will interact with the app, are: A List Activity, B List Activity, C List Activity, Menu Activity, and the Side Menu. The boundary classes access and utilize four Controller Classes: List View Controller, On Swipe Touch Listener, Search View Controller, Swipe to Refresh Controller. Each boundary class has its own layout file that will determine how information will be arranged and organized on that page. The main menu of the application include text fields for sign in credentials as well as the logo for the application which is a picture of an animated brain that is color coated, which represents a different par. After login in you are taking directly to the main activity page. Because the project is still incomplete at the moment, you will be directly taken to the slide menu where you can swipe seamlessly from page to page.

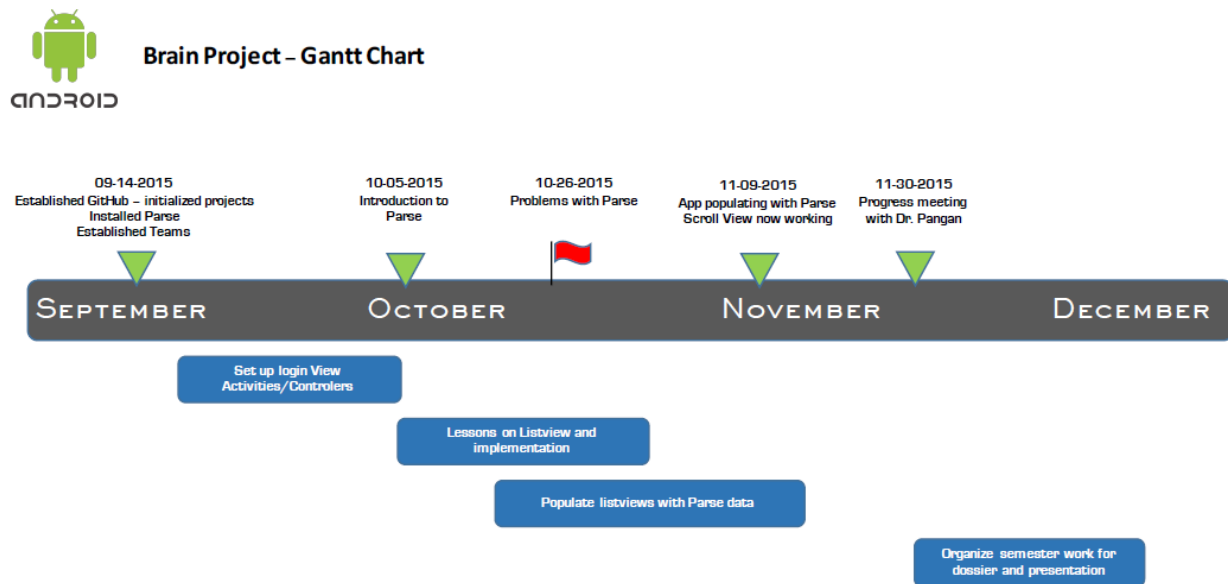


Figure 2.0 Gantt Chart

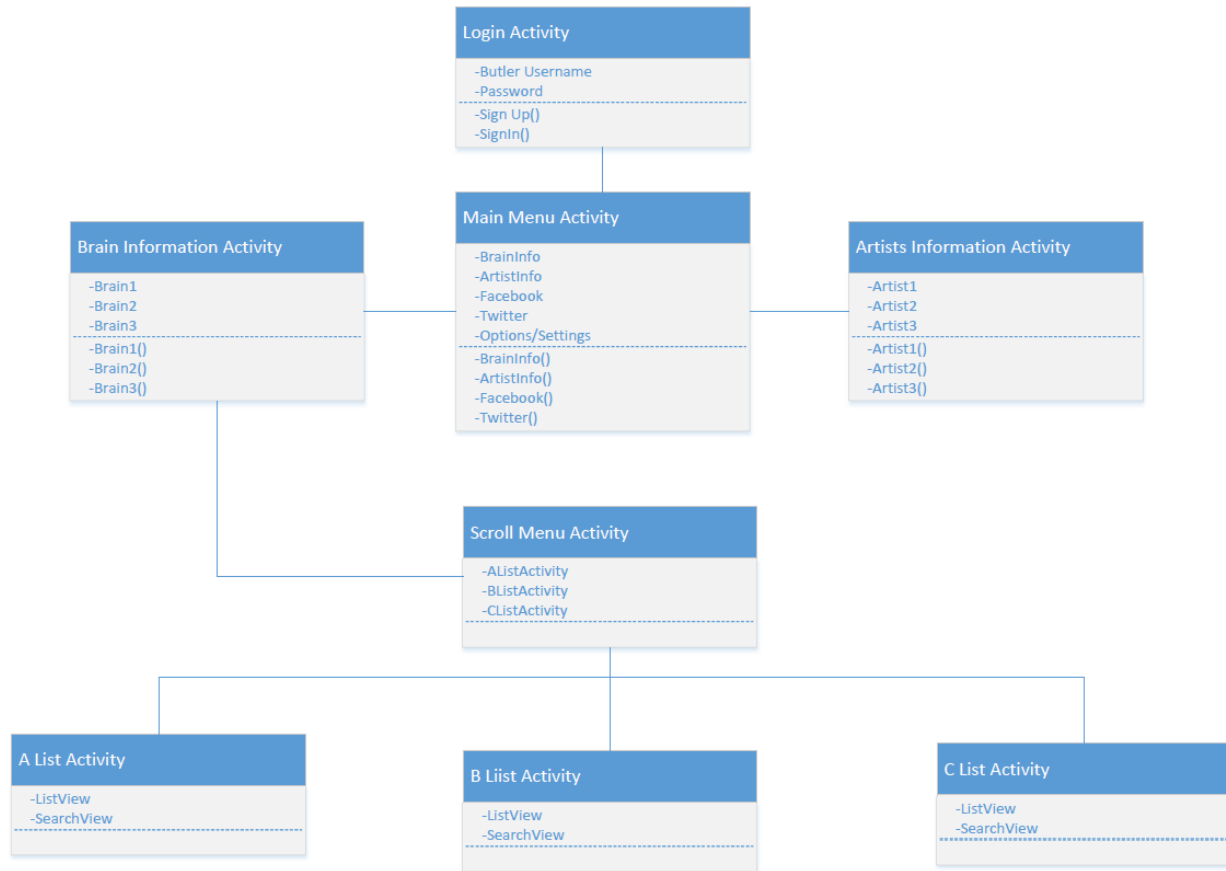


Figure 2.1 Class Diagram

## Functionality

Currently, the Android app is structured into three panels: Artists, Game, and Brains. The 'Artists' and 'Brains' panels are simple listview pages that allow the importing of information from our Parse database. These are scrollable lists that will display the main information for each piece of content that is added to the database. These activities utilize swipe to refresh, so if a user pulls down on the top of the list, the content will reload, giving them the most updated information from Parse. The 'Game' panel is currently empty, but ready to be developed. The user can swipe between these three panels to navigate through content, or they can press the title for each activity at the top of the app. There is also a slide menu for users can access to find their account information and settings by swiping to the right on the left edge of the screen.

## **Future Work**

- **Overarching Goals for the Brain Application:**
  - Application should help the Butler and Indianapolis community to understand and interact with the brains themselves when they arrive on campus.
  - Application should have pages/information on 10 different areas of the brain for 10 big physical brains.
  - App should keep track of a student's location and activate whenever a student is near one of the 10 brains
  - Each brain page should be interactive. (Contain information, questions or some sort of quiz or even a game about the brain information, and have links to external source on the internet for more information).
  - Should be easily accessible and adaptable for other institutions to utilize.
- **What we achieved this semester:**
  - Login Page.
  - Parse Back-End database setup.
  - Main menu page as well as slide menu page.
  - Layout pages for 10 separate brain pages (Activities).
  - Search feature to easily look for information on the application.
  - Snapchat like scroll feature to navigate through the various pages and swipe feature to refresh the page.
- **What needs to be done in the future:**
  - Import the necessary information into the application for each individual brain. (Including images, videos, links etc.)
  - Design and setup the quiz or game feature for the application for users to test out their newfound knowledge.
  - GPS/Geotag feature for finding/tracking location feature of the application.
  - Possibly more application design creation and modification