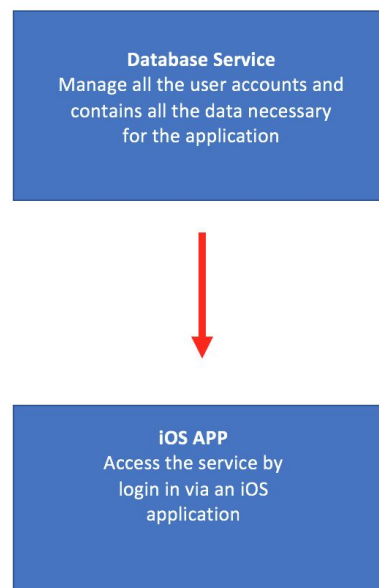


# Incremental and Regression testing

## Team GymWorkout

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1. Classification of Components
  - 1.1. Define all components
    - 1.1.1. Overall



The overall system consists of two major components. A Database service which is responsible for managing all of the user accounts as well as performing the main functionality of the system calls. The iOS application allows the users to access the functionality of the service by logging in through the mobile app.

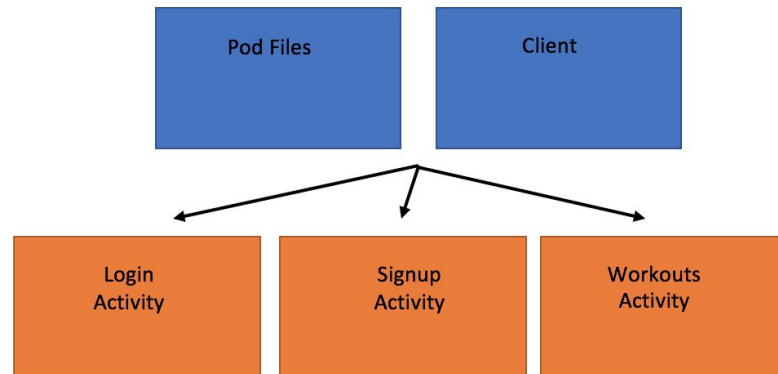
### Database Service

- Input: Actions from the iPhone application
- Output: Data to display in the iPhone application
- Dependencies: Next section provide more information regarding this
- Dependents: iPhone application

## iPhone Application

- Input: User actions
- Output: Displaying data based on the command from the user
- Dependencies: iOS Storyboards
- Dependents: Users

### 1.1.2. iOS Application



The iOS app consist of many activities. Each activity allows the users to access the different parts of the system. Which includes the following: login process, the signing up a new user and also accessing the curated workout list. The activities make use of pod files for packages and libraries as well as a client class to handle communication with database.

#### Activities (All in Orange)

- Input: User actions via the UI interface
- Output: Updating the interface based off of commands
- Dependencies: Pod Files and Client
- Dependents: Users

#### Pod Files

- Input: Construction of class
- Output: Accessing properties in the controller files
- Dependencies: None
- Dependents: Controllers

#### Client

- Input: Method calls to FireBase database
- Output: Response message for activities resulting from connection to database
- Dependencies: Podfile
- Dependents: Controllers

1.2. Which form of incremental testing did you follow?

Although we attempted to use multiple forms of incremental testing, we concentrated on primarily on the implementation of top-down testing. This ensured that the individual components of the application (such as communication between the application and the database service) was functioning as required, while allowing us to substitute the unavailable components (functionality to create personal workouts) for stubs so that they can be completed at a later point of time. This form of incremental testing also allowed us to postpone our focus on smaller details for a later point of time.

## Incremental and Regression Testing

### Incremental Testing

#### iOS Application

Defect	Description	Severity	How to Correct
1	The timing for the corec were being duplicated in which all the days had the same time.	3	Had to change the query to fix the timing so the hours matched what was on the Corec's website.
2	Initial delay of getting the hours for the Corec timings because user had to refresh the page.	2	Had to change so the code so the data displayed on when the page loaded.
3	The notification was off by 1 error. We assumed the time to be 6 AM but was sending the notification at the incorrect time.	3	Fixed the off by one error to handle the time calculation.
4	Getting to the detailed exercise page was causing a segue error.	2	The segue had the same name as the segue for detailed pre workout had the same segue identifier, so had to change the name.
5	The search bar instead of querying the workout list was querying the exercise list	3	Had to change the query.

#### Database Service

Defect	Description	Severity	How to Correct
1	Personalized workout is not stored for the correct user	3	Must ensure that the workout is sent to the correct user when being stored.
2.	Personalized workout not	3	Must ensure that the rules for the

	editable on the database		database allows for write
3.	Does not display all active users	2	Must ensure that the call for the analytics is made correctly.
4.	Detailed description of the database was not being fetched	3	Ensure that the description is being called from the correct workout

## Regression Testing

### iOS Application

Defect	Description	Severity	How to Correct
1	Displays the the blank page for detailed exercise page	3	Need to make correct connection the database to get the data.
2	The notification for reminder to workout will not close for a long period of time	2	Had to write a method that closes in a notification after a preset duration

### Database Service

Defect	Description	Severity	How to Correct
1.	Personalized workout does not fetch correct users workouts	3	Must ensure that the workout is received from the correct user when being fetched
2.	The user's Personalized Workout is not correctly updated on the database while performing an update query to the database.	2	Ensure that the data being sent to database is validated so new data does not corrupt existing data.
3	Detailed Workout description does not load the correct workouts description	3	Must ensure that the description for the workout is referencing the correct workout.
4	Incorrect number of active users	2	Must ensure to take into account the fact that a user from two devices would be considered as two different users when considered for additional functionality.

## Update Product Backlog

S.NO	Requirement	Status	Sprint
1	User can log in to the application	Complete	1
2	User can sign in to the application	Complete	1
3	User can sign out of the application	Complete	1
4	User can choose a preset workout based on muscle groups from a list of preset workouts	Complete	1
5	User can switch between tabs using a tab bar	Complete	1
6	User can search for selected workouts by name or muscle group	Incomplete	In-Progress: Moved to Sprint 2
7	User can view a details about individual workouts	Complete	Sprint 2
8	User can choose to create a workout and edit the number of sets and reps for exercises	Complete	Sprint 2
9	User can view a list of created workouts	Complete	Sprint 2
10	User can delete workouts from the workout list	Complete	Sprint 2
11	User can edit a profile picture	Incomplete	Planned for Sprint 2
12	User can choose to look for workout partners	In-progress	Planned for Sprint 2
13	User can choose to look for workout partners on a map view	In-progress	Planned for Sprint 2
14	User can message workout partners	In-progress	Planned for Sprint 2
15	User can check for the Corec	Complete	Sprint 2

	timings		
16	User receives daily notifications to go to the gym	Complete	Sprint 2