Deliverable- II

for

Club Management Application

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Individual Contribution: Life-Cycle and Scheduling

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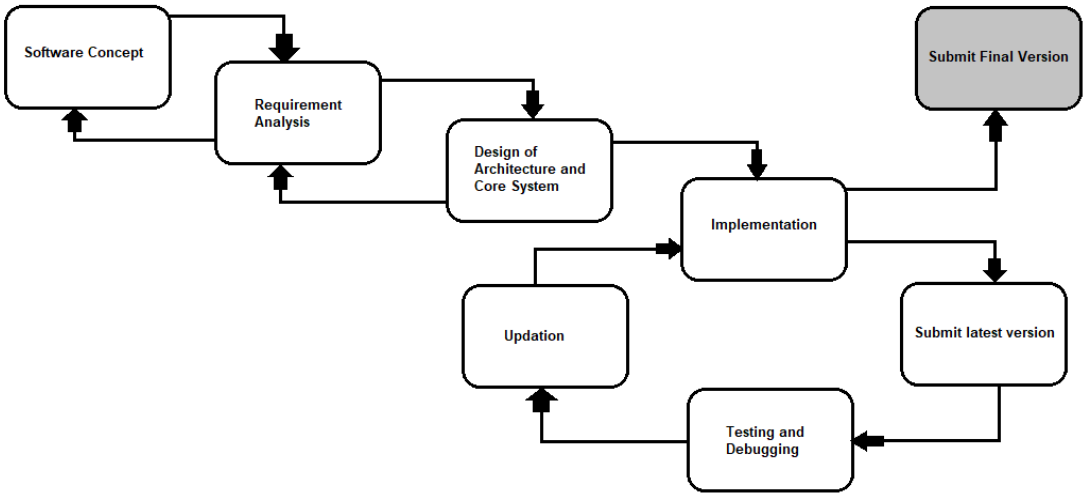
1. Life-Cycle



We would like to use the evolutionary model to describe the life-cycle of our project. Evolutionary model is a combination of waterfall and iterative models of software development life cycle. This particular model is used because we will be developing an Android app for our product. The first version of the app can be directly developed using the waterfall model. But further testing, debugging and updating the app to different versions will be done using the iterative model from the figure shown above.

2. Tools Used

2.1 Planning Tool

Libre Office, Google Docs and Microsoft Office

2.2 Design Tool

Canva, StarUML and Creately

2.3 Version Control

Git, Github

2.4 Development Tool

Android Studio, Firebase CLI

2.5 Bug Tracking

Android Studio, GIthub

2.6 Testing Tool

JUnit, Device mockup

3. Deliverables

We expect to have a working mobile application with the features as mentioned in our SRS for a single club. This application will handle user operations as well as admin operations for a club.

The application will be linked to Firebase, and all cloud connectivity/databases setup and ready to go.

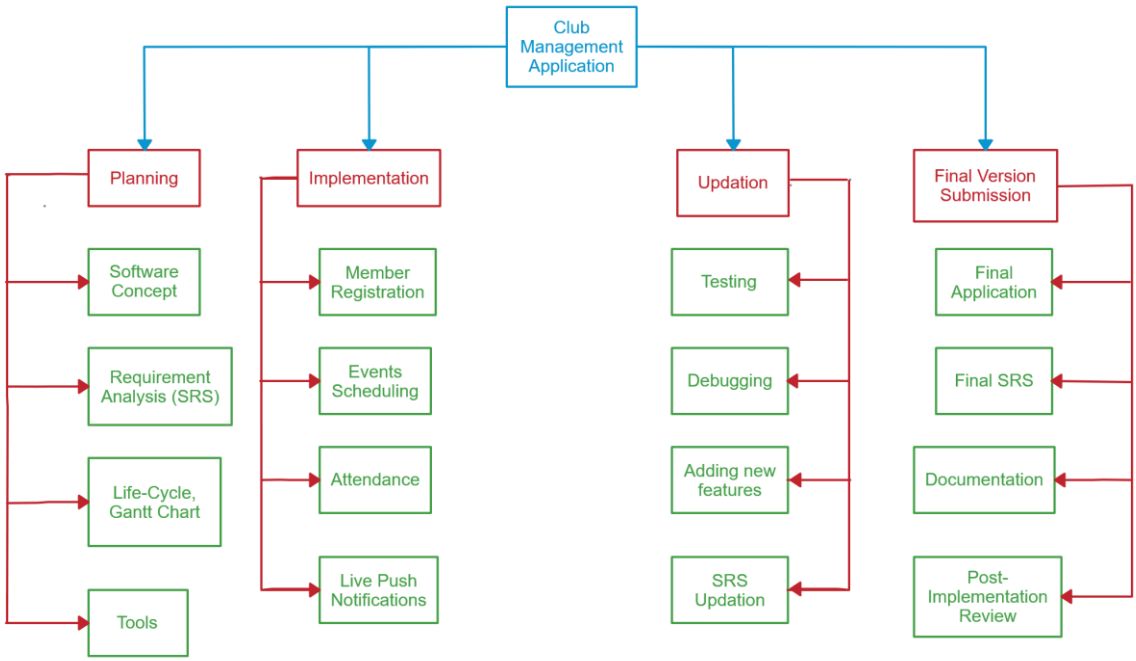
Build components: Android app, club management features

Reason: Application is completely built by us, all planned features do not exist as libraries or modules and are custom built for our use case

Reused components: Libraries as stated in SRS, Google auth platform, Firebase API calls, Firebase Messaging.

Reason: All external libraries and API calls follow a defined standard. These calls are reused from documentation guidelines and best practises. These would be fairly standard across any application using the same infrastructure stack and hence are reused.

4. Work Breakdown Structure (WBS)



5. Efforts

We will use the formula below for computing efforts:

Effort, $E = a_b (KLOC)^b$ Person Months

We consider the Basic Cocomo model and Organic Software Project for our project. Hence, the default values for a_b= 2.4 and b = 1.05.

1. Member Registration:

   Effort $E_1 = 2.4^* (0.3)^{1.05} = 0.68$ Person Months

2. User and Admin Interface:

   Effort $E_2 = 2.4^* (0.5)^{1.05} = 1.15$ Person Months

3. Event Scheduling:

   Effort $E_3 = 2.4^* (0.2)^{1.05} = 0.44$ Person Months

4. Attendance:

   Effort $E_4 = 2.4^* (0.3)^{1.05} = 0.68$ Person Months

5. Live Push Notifications:

   Effort $E_5 = 2.4^* (0.2)^{1.05} = 0.44$ Person Months

Total Effort in the Project, E = 3.4 Person Months

6. Scheduling