# Project Plan

The following sections describes the how the project is structured, which includes managerial information, constraints on the system, and a schedule of activities. Section 3.1 describes the organization of the project, which includes information about the members, the established communication mechanisms, the schedule of meetings, and the assigned roles. Section 3.2 contains the hardware and software constrains of the system. Finally, Section 3.3 contains the schedule table for the project.

## Project Organization

This section contains managerial information about the project. Section 3.1.1 contains the list of members, together with contact information. Section 3.1.2 contains a list and use case of the established communication mechanisms for the project. Section 3.1.3 contains the schedule of meetings and a general description of the meeting structure (for a more detailed description, see Appendix C). And finally, Section 3.1.4 contains the roles used in the project and who they are assigned too.

### Members

The following members are involved in the project:

* Armando J. Ochoa, email: [aocho032@fiu.edu](mailto:aocho032@fiu.edu)
* Anthony Sanchez-Ayra, email: [asanc375@fiu.edu](mailto:asanc375@fiu.edu)
* M. Kian Maroofi, email: [mmaro017@fiu.edu](mailto:mmaro017@fiu.edu)
* Yovanni Jones, email: [yjone004@fiu.edu](mailto:yjone004@fiu.edu)
* Teriq Douglas: [tdoug016@fiu.edu](mailto:tdoug016@fiu.edu)

### Communication Mechanisms

The project members use the following means of communication:

#### WhatsApp

A WhatsApp group has been created to serve as the primary synchronous means of communication between the team. Immediate notices about requirements, updates, and meeting times are relied through the chat. Documents are can also through the chat, using WhatsApp desktop, but this use is discouraged in favor of the GitHub repository and Discord App.

#### GitHub

A GitHub repository has been created to serve as the main store for the project and project documents. Three repos are defined:

* CEN-Team-5, which contains the documents of the project, e.g., deliverable sections, use case, etc. The GitHub task system is also used to keep track of the scheduled activities and to whom they are assigned.
* CEN-React-App, which contains the code for the front-end side of the project.
* CEN-Backend, which contains the code for the back-end side of the project.

Detailed notices regarding specifications or to-do tasks are also posted to the GitHub.

#### Discord

A Discord server has been created to serve as a means for quickly exchanging documents and doing video and voice calls whenever they are necessary.

### Schedule of Meetings

A detailed list of the meetings is All members meet on a weekly basis, each Monday at around 1:00 pm. A

### Roles

Each member has several roles assigned to them at the same time. Two contexts for roles are differentiated, *management roles*, some of which refer to roles which are only active during the weekly or supplementary meetings; and *project roles*, which refer to roles in action during the project as a whole.

#### Management Roles

Each member has a single, or none, management role assigned:

|  |  |
| --- | --- |
| Member Name | Roles |
| Armando J. Ochoa | Primary Faciliatory |
| Anthony Sanchez-Ayra | Team Leader |
| M. Kian Maroofi | Time Keeper |
| Yovani Jones |  |
| Teriq Douglas | Minute Take |

Table 1: The management roles assigned to the team members.

#### Development Roles

Each member has one or more project roles assigned:

|  |  |
| --- | --- |
| Member Name | Roles |
| Armando J. Ochoa | Front-End Developer, Document Editor |
| Anthony Sanchez-Ayra | Back-End Developer, Database implementor |
| M. Kian Maroofi | Front-End Developer |
| Yovani Jones | Back-End Developer, Tester |
| Teriq Douglas | Back-End Developer |

Table 2: The development roles assigned to the team members.

## Hardware and Software Requirements

The hardware and software materials needed to complete the project are captured in the following subsections.

### Hardware Requirements

The testing environment is a network-enabled computer system with the following hardware requirements:

* Processor: Intel (R) Core (TM) i7-7700 CPU @ 3.60GHz
* Installed Memory (RAM): 16GB DDR4 SDRAM
* Storage: 512GB
* Network Adapter: Inter (R) Ethernet Connection (2) I219-LM

Each member has its own individual station. The details of these stations are not reported in this document.

### Software Requirements

The testing environment has the following software applications:

* MySQL 8.0, which is used for a back-end data store server.
* Java JDK 1.8.0\_221-b11, with the following external libraries:
  + *netty-socketio*, a java implementation of *socket.io* used for front-end/back-end communication.
* Node.JS version 10.16.3 LTS, with the following external libraries:
  + *React*, which is used to create the front-end.
  + *Redux*, which is used for state management of the front-end.
  + *Router*, which is used to handle front-end navigation.

## Project Schedule Table

The project is divided into several tasks, which are collected in Section 3.3.1. These tasks build towards the following deliverables:

* Deliverable 1, Software Requirements Document (SRD; this document), which has the following milestones:
  + M1, Section 4, Requirements Elicitation, and Section 5, Requirements Analysis, are completed.
  + M2, Software Requirements Document is completed.
* Deliverable 2, Design Document (DD), which has the following milestones:
  + M3, Section 2, Proposed Software Architecture, and Section 3, Detailed Design, are completed
  + M4, Design Document is completed.
* Deliverable 3, Final Systems Document (FSD), which has the following milestones:
  + M5, System Implementation is Completed.
  + M6, Section 7, Testing Process, and Appendix F, Document code for Test Driver are completed.
  + M7, Final System Document is completed.

### Task Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Group | Description | Duration (Days) | Dependencies |
| T1 |  | Set up Communication Methods: Weekly Meeting, WhatsApp Group, and GitHub. | 1 |  |
| T2 | Requirements Elicitation | Identify Use Cases for the Complete System | 15 |  |
| T3 | Requirements Elicitation | Decide on 10 Implementation Use Cases | 1 | T2 |
| T4 | Requirements  Elicitation | Create Use Case Diagrams | 6 | T2 |
| T5 | Requirements Analysis | Create Sequence Diagrams and Class Diagram for 10 Implementation Use Cases | 5 | T3 |
| T6 | Requirements Analysis | Create Scenarios and Object Diagram for Use Cases | 5 | T3 |
| M1 |  | Write up SRD Sections 4 and 5 | 1 | T1, T4, T5, T6 |
| T7 |  | Write up SRD Sections 1-3, 6-9 | 22 | T1 |
| M2 |  | Compile SRD | 2 | M1, T7 |
| T8 | Development | Set up Project Environments | 1 | T1 |
| T9 | Development | Create React Mock-up | 23 | T8 |
| M3 |  | SRD Presentation | 3 | M2, T9 |
| T10 | Detailed Design | Decide on the Subsystem, Data Management. | 5 | M2 |
| T11 | Detailed Design | Create Detailed Class Design for the Subsystems. | 8 | T10 |
| M4 |  | Write up DD Section 2 and 3 | 12 | T11 |
| T12 |  | Write up DD Sections 1, 4-7 | 25 | M2 |
| M5 |  | Compile DD | 6 | M4, T12 |
| T13 | Development | Implement Front-End Subsystems | 15 | M3, T10 |
| T14 | Development | Implement Back-End Logic Subsystems | 15 | T10 |
| T15 | Development | Implement Back-End Datastore Subsystems | 15 | T10 |
| M6 | Development | Integrate the Subsystem. The Implementation is Completed. | 3 | T13, T14, T5 |
| T16 |  | Update Sections from DD and SRD to their FSD version. | 3 | M5, M6 |
| T17 | Testing | Set up Testing Environment and Formulate Test Cases | 5 | M6 |
| T18 | Testing | Perform Testing Process | 5 | T17 |
| M7 |  | Write up FSD Section 7 and Appendix F | 5 | T18 |
| T19 | Development | System Verification | 3 | T18 |
| T20 |  | Write up FSD Sect. 4-6, Appendix A-E, G | 5 | T19 |
| M8 |  | Complete FSD | 4 | T16, M7, T20 |
| M9 |  | FSD Presentation | 3 | M8 |

Table 3: Task Schedule for the Project