SOFTWARE PROJECT MANAGEMENT PLAN

RAJAS BONDALE, DEVANSH SHAH

February 2022

Chapter 1

Introduction

1.1 Project Overview

"Student Networking Website" is a networking website for students where they can write posts on almost any interest of their own. Every posts will have a comment section where discussion on the post can be held. Students can like or comment on the posts written by other users. This will allow students to open up about their interests and gain knowledge or distribute their knowledge. It'll develop a sense of collaboration among students and encourage cooperation. The proposed application will be a website and will run on most of the web browsers and operating systems.The users of the application do not need any technical knowledge to use the site. Users will need to have an internet connection to access the

web application.

1.2 Project Deliverables

The complete product including the user manuals and project closure documents alongwith the delivery of the final web application.

The lists of project deliverables are:

- Software Project Management Plan(SPMP)
- Software Requirements Specification(SRS)
- Software Test Plan (STP)
- Working application
- User manuals
- Installation document
- Project closure document

Chapter 2

Project Organisation

2.1 Software Process Model

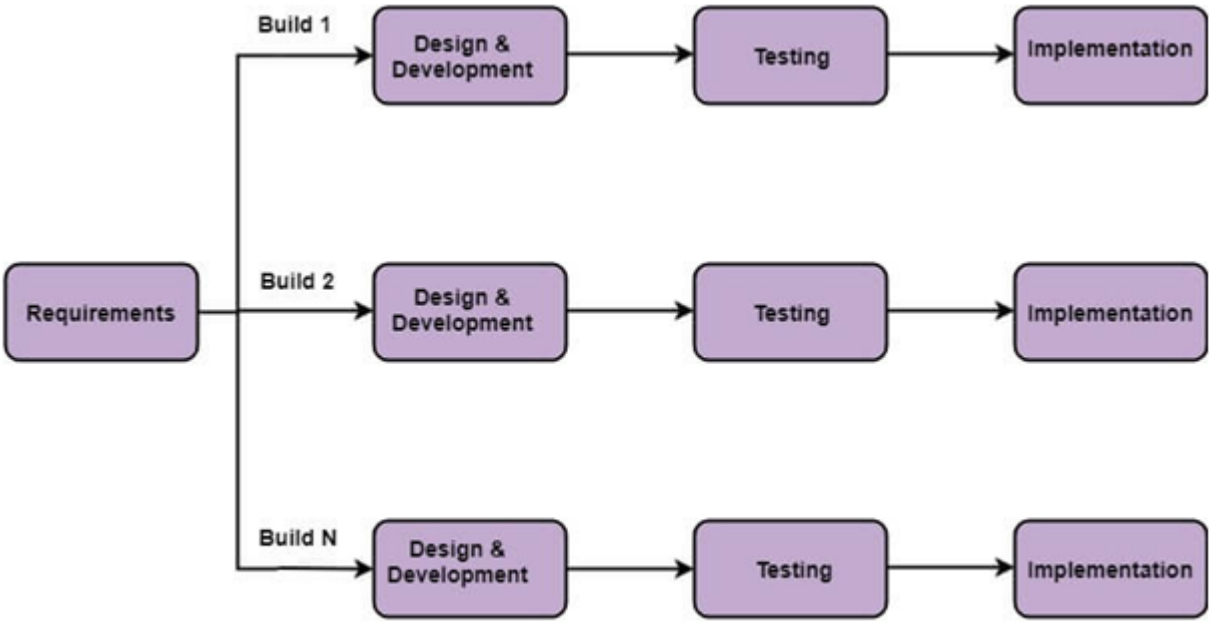

Fig: Incremental Model

We have used Incremental Model for software development as we found it to be the most appropriate for this project. It is a process model where

requirements divided into multiple standalone modules of the software development cycle. Each module goes through the requirements, design, implementation and testing phases. Every consecutive increment adds to the previous increment.

Each increment goes through all phases of design, testing and implementation. Every feature added can be treated as a separate increment. Once an increment is added, there's little chance of having to go back and fix some error. Developers can focus completely on adding a new increment, without having to worry about disturbing previously written code.

Delivering a working prototype requires short time. Also, with every prototype made, developers are able to recognize what is remaining in the project. Prototypes also act as proof of development to the clients.

2.2 Roles and Responsibilites

- Project Manager: Rajas Bondale The project manager is responsible for the complete planning, execution, monitoring, and delivery of the project. The planning includes the planning out the scope,

scheduling and a basic design of the project. The execution includes the transformation of low level design into a working model which includes development and testing of the product. The delivery activity includes delivering the finished products to the clients and other formalities.

- Developer: Rajas Bondale, Devansh Shah The developers are responsible for implementation of the proposed features and functionalities. They develop the application based on the agreed upon designs. The developers also produce working and tested prototypes as deliverables.

- Tester: Devansh Shah The role of the tester is to test the application based on the test cases. The tester is responsible for creating the Test Plan and Test Cases. The tester should test the application, report the defects and assign the defects back to the developers if an issue is found. The tester is responsible for conducting the smoke testing, system testing, regression testing and integration testing.

2.3 Tools and Techniques

1. SRS and SPMP documents required TexWorks and Overleaf.
2. Gantt chart was created using Gantt Project.
3. We will use Star UML for creating the necessary UML diagrams.
4. ReactJS will be used for frontend UI creation.
5. The backend will be designed by ExpressJS web framework and NodeJS web server.
6. Data gathered will be stored in MongoDB database. This No-SQL database is very easy to use and scalable.

Chapter 3

PROJECT MANAGEMENT PLAN

3.1 Tasks

3.1.1 Information gathering

Description

Planning out what the website should be about and should like by discussing among team members. Designing problem statements, laying down the scope and gathering requirements which are realistic and doable, and classifying those into functional and non functional requirements

Deliverables and milestones

Completion of the SRS document.

Resources Needed

Discussion among team members and peers

Dependencies and constraints

None

3.1.2 Modelling requirements

Description

Creating the UML diagram based on the requirements specified in the SRS document.

Deliverables and milestones

UML diagram.

Resources needed

StarUML software

Dependencies and constraints

None

Risks and contingencies

None

3.1.3 Coding

Description

Developing and demonstrating working prototypes, gaining user feedback and suggestions. Once the prototype is declared succesful, beginning the development of the final product.

Deliverables and milestones

Prototype, Final website and SDD.

Resources needed

MERN stack

- React.js 17.0.2
- MongoDB 5.0.5
- Express.js 4.17.2
- Node.js 17.5.0

Dependencies and constraints

SRS, SPMP, Javascript, MongoDB

Risks and contingencies

Prototypes developed might not satisfy the user's demands which could delay the release of the product.

3.1.4 Testing

Description

Two tests will be performed: 1:Alpha-testing:Client Side Testing Of Product 2:Beta-testing:Developer Side Testing Of Product.

Deliverables and milestones

Final Software, User Guide

Resources needed

Computers with a web browser and active internet connection will be necessary.

Dependencies and constraints

Internet Connection needed during Alpha Testing,SRS,SPMP

Risks and contingencies

There could be network access failure or database server failure. Can be fixed by having a database on the cloud.

3.1.5 Delivery

Description

Deployment and presentation

Deliverables and milestones

Presentation

Resources needed

None

Dependencies and constraints

None

Risks and contingencies

None

3.1.6 Maintainence

Description

Maintaining the database,Network testing and updating the software as per the client requirements

Deliverables and milestones

Maintenance and Updation Report

Resources needed

MERN stack

Dependencies and constraints

Javascript and MongoDB cloud database

Risks and contingencies

None

3.2 Assignments

Tasks Assignment		
Tasks	Main Resource	Supplemental Resource
Software Requirement Specification	Rajas Bondale	Devansh Shah
Software Project Management Plan	Rajas Bondale	Devansh Shah
Software Design Document	Devansh Shah	Rajas Bondale
Coding	Devansh Shah	Rajas Bondale
Testing	Rajas Bondale	Devansh Shah
Software Requirement Specification	Rajas Bondale	Devansh Shah
User Guide	Devansh Shah	Rajas Bondale
Project Management	Rajas Bondale	Devansh Shah

3.3 Timetable

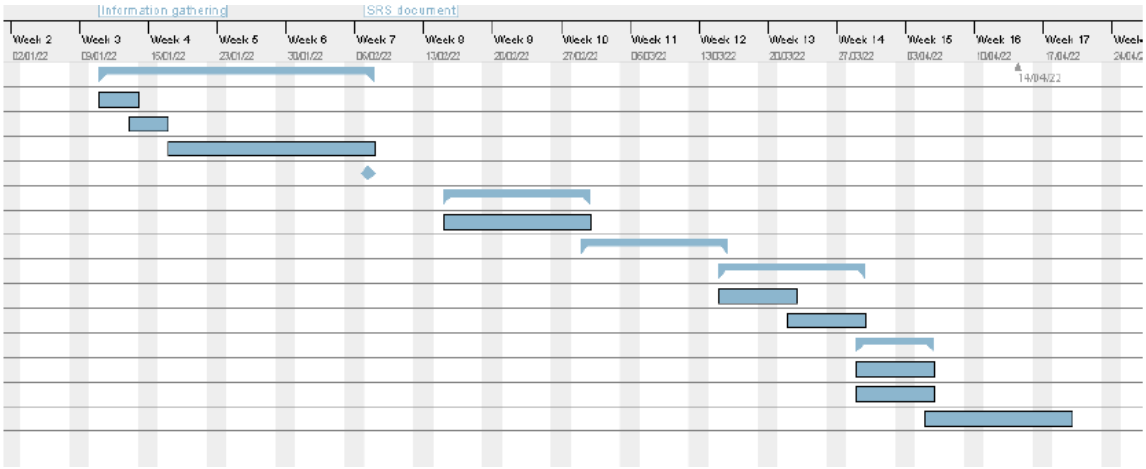

Figure 3.1: Gantt Chart

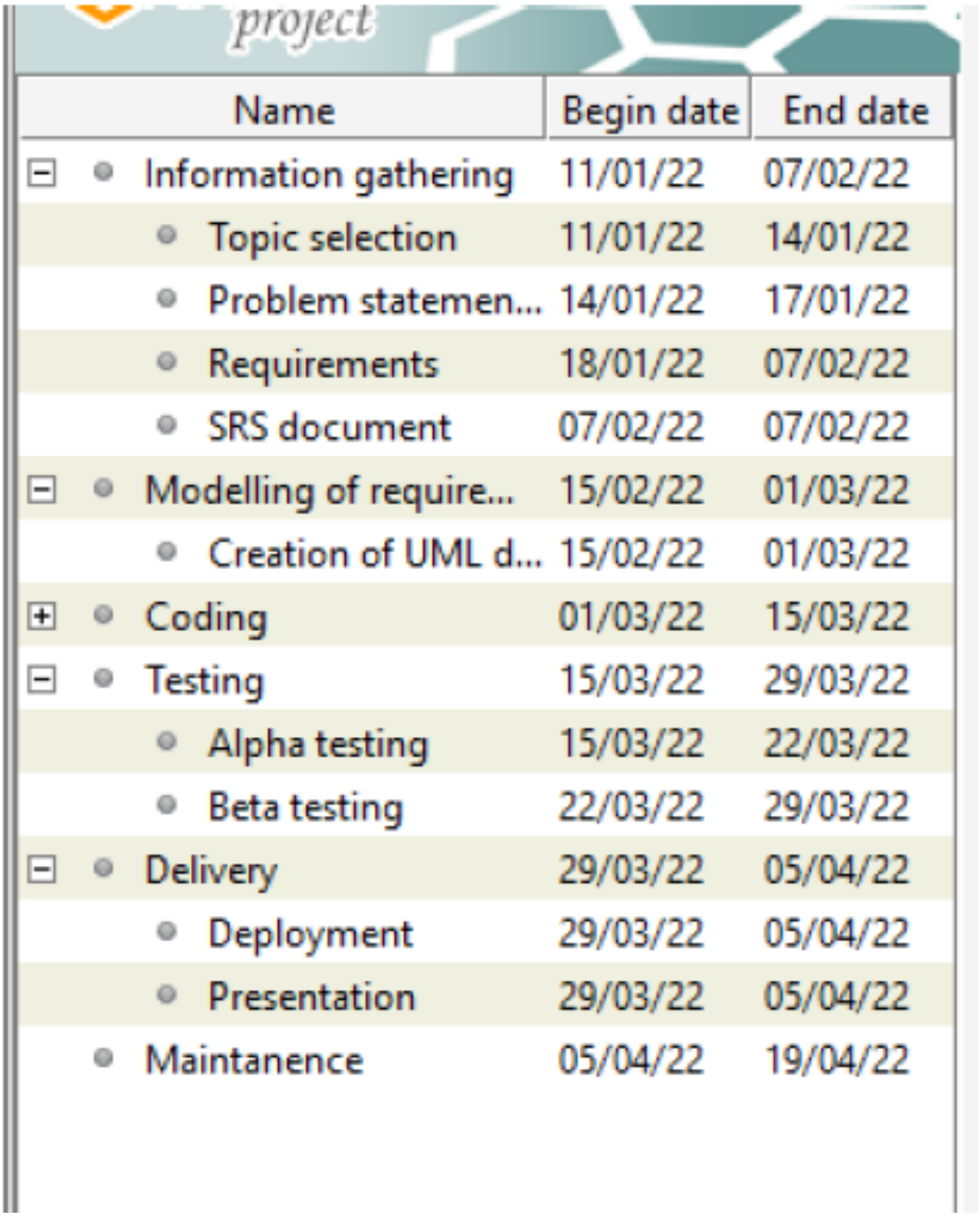

Figure 3.2: Tasks

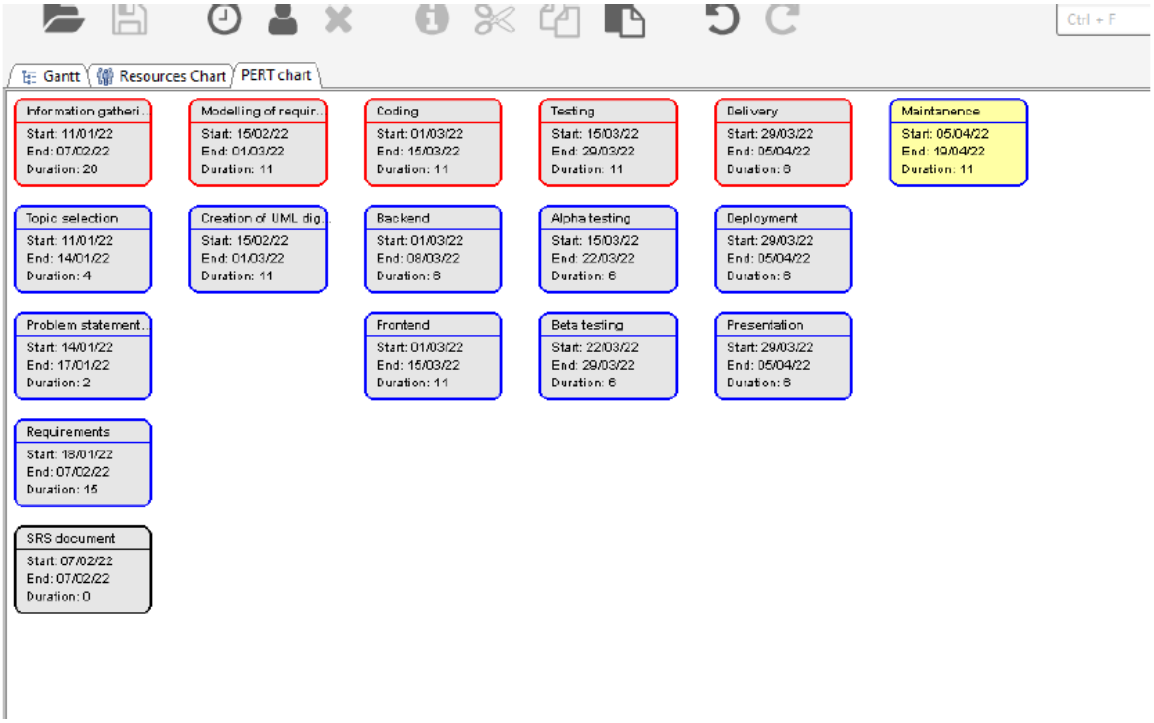

Figure 3.3: PERT Chart