

PROJECT PLANNING PHASE

Assignment of Work to Team Members:

- 1. Pusuluri.Ajith – Frontend Development
- 2. Shaik.Reshma – Backend Development
- 3. Seelam.Pallavi – Testing & Deployment
- 4. Mundru.Venkatesh – Final Documentation
- 5. Kotapati.SaiRam – UI/UX Design & Survey Analysis

Frontend Development

The frontend serves as the client and the backend acts as the server.

The frontend encompasses the user interface, presentation, and interactions. It uses the Axios library to facilitate easy communication with the backend through RESTful APIs.

To enhance the user experience, the frontend leverages the Bootstrap and Material UI libraries, creating a real-time and visually appealing interface for users.

Backend Development

On the backend, we utilize the Express.js framework to manage server-side logic and communication. Express.js provides a robust foundation for handling requests and responses efficiently.

Express.js is a lightweight and flexible web application framework that runs on Node.js, designed to handle server-side logic and communication with ease. It simplifies HTTP request handling through an intuitive routing system, letting developers define how the application should respond to client requests like GET, POST, PUT, and DELETE.

It also supports middleware functions (authentication, logging, error handling), and integrates with MongoDB via Mongoose, making it ideal for full-stack applications and building RESTful APIs

Testing & Deployment

For modern JavaScript development, React and npm offer a rich ecosystem of libraries for testing.

React testing libraries, like

- React Testing Library
- Jest

are used to test frontend components by simulating user interactions and ensuring components behave as expected.

For backend testing, Mocha, Chai, and Supertest are commonly used—especially for testing Node.js applications and Express APIs.

These tools ensure quality and stability before deployment.

Final Documentation

Final documentation typically includes:

- ❖ Project Summary: Clear overview of deliverables, goals, and outcomes.
- ❖ Technical Documentation: Codebase details, APIs, schema, deployment steps.
- ❖ User Guide or Manual: Client-level instructions to use the system.
- ❖ Testing Reports: QA reports with bug logs and performance metrics.
- ❖ Invoice and Payment Records: Final billing summary (if applicable).
- ❖ Handover Checklist: All deliverables, credentials, and access rights for the client.

UI/UX Design & Survey Analysis

Handled by Kotapati.SaiRam, this phase focused on building user-centric designs and gathering user preferences before development.

UI/UX Design:

- Tools used: Figma, Adobe XD
- Created wireframes and interactive prototypes
- Ensured responsiveness and accessibility
- Provided consistent design handoffs to the frontend team

Survey Analysis:

A user survey was created using Google Forms to gather real-time insights.

Key Survey Metrics:

- ❖ Awareness of complaint systems
- ❖ Ease of use rating (1–5 scale)
- ❖ Preferred notification mode (SMS, Email, App)