1. **Introduction:**

   Purpose: The purpose of this project is to develop a **Community Marketplace App** exclusively for students. The app aims to provide a platform where students can **buy, sell, and exchange goods and services** within their community.

   Background: Many students face challenges in finding affordable products, services, and resources within their network. A community marketplace app can address this gap by fostering peer-to-peer transactions in a trusted environment.

   Scope: The app will cover functionalities such as user registration, product listing, buying/selling, exchange, search options, notification.

2. **Problem Statement:**

   Students often struggle with high costs, lack of local resources, and inefficient communication when trying to trade or share items. This app will solve the problem of **limited accessibility** and create a community-focused, efficient, and affordable marketplace as student needs.

3. **Objectives:**

   1. To create a user-friendly platform for students to trade goods and services.
   2. To facilitate communication between buyers and sellers with the contact information.
   3. To allow search, filter, and review functionalities to improve user experience.

4. **Methodology:**

   The project execution will follow these steps:

   1) **Data Collection**: Interviews with students to understand their needs and expectations.
   2) **Tools/Technologies to be Used**:
      - Front-end: React.js, Tailwind
      - Back-end: Node.js, Express.js
      - Database: MongoDB
   3) **Experimentation/Implementation**:
      - Design user interface prototypes.
      - Develop core features (user registration, product listing, search, and notification).
      - Test the app with a small student group for feedback.
      - Improve the app based on feedback.

5. Project Plan:
   The project will be divided into the following phases:

   - **Phase 1**: Requirement gathering and UI/UX design (2 weeks).
   - **Phase 2**: Core development of the app (4 weeks).
   - **Phase 3**: Integration of features like notifications and user reviews (3 weeks).
   - **Phase 4**: Testing, bug fixes, and performance optimization (2 weeks).
   - **Phase 5**: Final presentation and project submission (1 week).

   Milestones:

   - completion of UI/UX Design.
   - Functioning prototype.
   - Collection of user feedback from testing.
   - Delivery of the final, polished application.

6. Expected Deliverables:

1. Fully functional **Community Marketplace App** for students.
2. Presentation slides summarizing the project.
3. Complete codebase hosted on GitHub.
4. Final project report.

7. References:

Node.js Documentation

- Runtime environment for JavaScript.
- Link: https://nodejs.org/en/docs/

Express.js Documentation

- Backend library.
- Link: https://expressjs.com/

MongoDB Documentation

- Database resource for managing product and user data.
- Link: https://www.mongodb.com/docs/

React Documentation

- Frontend: Components, ui/ux.
- Link: https://react.dev/reference/react

GitHub

- Version control and collaboration for code management.
- Link: https://github.com

NPM (Node Package Manager)

- Used for installing and managing backend libraries.
- Link: https://www.npmjs.com

OpenAI ChatGPT: For code explanations, technical guidance, and problem-solving assistance.

- Link: https://openai.com/chatgpt