

PROJECT MANAGEMENT TOOL

(React + Node.js + MongoDB / PostgreSQL)

This document describes a full-stack Project Management Tool with:

Frontend: React (Vite) – Dashboard, Projects, Kanban Board, Task Manager

Backend: Node.js + Express – JWT authentication, REST APIs

Database: MongoDB (default) or PostgreSQL

Deployment: Netlify / GitHub Pages / 000webhost (Frontend),

Render / Railway / Heroku (Backend)

MAIN FEATURES

- User authentication (Register/Login)
- Create projects and assign members
- Create and manage tasks
- Set due dates and priorities
- Kanban board (To Do, In Progress, Done)
- Track task progress
- Role-based permissions
- Activity tracking and comments

SUGGESTED FILE STRUCTURE

backend/

- server.js
- models (User, Project, Task)
- routes (auth, projects, tasks)
- middleware (auth)

frontend/

- App.jsx

- Dashboard.jsx
 - ProjectView.jsx
 - KanbanBoard.jsx
 - Components (TaskCard, ProjectCard, Header)
 - API configuration
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BACKEND TECHNOLOGIES

- Express.js
 - JWT Authentication
 - Mongoose (MongoDB) or Sequelize (PostgreSQL)
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FRONTEND TECHNOLOGIES

- React.js
 - Axios
 - React Router
 - Drag & Drop Kanban Board
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RUN LOCALLY

1. Backend:

- cd backend
- npm install
- npm run dev

2. Frontend:

- cd frontend
- npm install
- npm run dev

DEPLOYMENT

Frontend: Netlify, GitHub Pages

Backend: Render, Railway, Heroku

Database: MongoDB Atlas / PostgreSQL Cloud

GITLAB SETUP

1. git init
 2. git remote add origin
 3. git add .
 4. git commit -m "Initial Commit"
 5. git push -u origin main
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FUTURE ENHANCEMENTS

- Notifications
 - Email reminders
 - Advanced analytics
 - Admin panel
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Prepared for academic and professional project submission.