

## 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)

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## 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
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## 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

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## DEPLOYMENT

Frontend: Netlify, GitHub Pages

Backend: Render, Railway, Heroku

Database: MongoDB Atlas / PostgreSQL Cloud

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## 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.