

MVP Task Platform - Setup Guide

Prerequisites

- Node.js (v16+)
- npm or yarn
- Git

Quick Setup

1. Clone & Install

```
git clone  
cd mvp_task_platform
```

2. Backend Setup

```
cd backend  
npm install  
npm install --save-dev jest supertest  
cp .env.example .env  
npm run dev
```

3. Frontend Setup (new terminal)

```
cd frontend  
npm install  
npm start
```

4. Access Application

- Frontend: <http://localhost:3000>
- Backend: <http://localhost:5002>

Configuration

Environment Variables (backend/.env)

```
PORT=5002
JWT_SECRET=your-secret-key
JWT_EXPIRE=7d
EMAIL_HOST=smtp.gmail.com
EMAIL_PORT=587
EMAIL_USER=your-email@gmail.com
EMAIL_PASS=your-app-password
```

Database

- SQLite (auto-created)
- Location: `backend/src/db/database.sqlite`

First User

- Go to `http://localhost:3000`
- Register an account
- First user becomes admin automatically

Development

Backend Commands

```
npm run dev    # Development server
npm start      # Production server
npm test       # Run Jest tests
```

Frontend Commands

```
npm start      # Development server
npm run build   # Production build
npm test       # Run Jest tests
```

Testing

Backend: `cd backend && npm install --save-dev jest && npm test`

Frontend: `cd frontend && npm test`

Troubleshooting

Port Issues

```
lsof -i:5002      # Find process using port
kill -9          # Kill process
```

Common Fixes

- Ensure backend runs before frontend
- Check `.env` file configuration
- Reset database: delete `backend/src/db/database.sqlite`
- Check console for error messages

Project Structure

```
mvp_task_platform/
├── backend/src/
│   ├── routes/      # API endpoints
│   ├── models/      # Database models
│   ├── middleware/  # Auth & validation
│   └── controllers/ # Business logic
├── frontend/src/
│   ├── pages/       # Main pages
│   ├── components/  # UI components
│   ├── context/     # State management
│   └── utils/        # API client
```

Features

- User authentication & authorization
- Task management (CRUD operations)
- Real-time collaboration with comments
- Activity tracking
- Admin dashboard
- Dark/Light theme
- Responsive design

Usage

- Register/Login at <http://localhost:3000>
- Create and manage tasks
- Collaborate with comments
- Track team activity
- Admin users can manage platform

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