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## **Task Manager App – Project Description & Flow**

[Github link](#)

### **Overview**

The Task Manager App is a full-stack web application designed to help users manage projects and tasks collaboratively. It supports user registration, authentication, project and task management, sharing projects with other users, and profile management. The app is built with a React frontend and a Node.js/Express/MongoDB backend.

### **Phase 1: SignUp / Login**

1. Registration: User creates account with name, email, password
2. Login: User authenticates and receives JWT token
3. Dashboard: User sees overview of their projects and tasks

### **Phase 2: Project Creation & Management**

1. Create Project: User creates a new project with name and description
2. Project Dashboard: User sees project details, tasks, and sharing options
3. Share Project: User can share project with other users with specific roles:
  - Owner: Full access (create, edit, delete, share)
  - Editor: Can create and edit tasks
  - Viewer: Read-only access

### **Phase 3: Task Management**

1. Create Tasks: Users with Editor/Owner roles can create tasks with:
  - Basic info (name, description)
  - Priority levels (Low, Medium, High, Critical)
  - Assignee selection
  - Due dates
  - Tags for categorization
  - Estimated/actual hours
2. Task Organization: Tasks can have sub-tasks for complex workflows

3. Task Updates: Status changes, progress tracking, comments

#### Phase 4: Collaboration & Monitoring

1. Real-time Updates: All changes reflect immediately across users
2. Filtering & Search: Advanced filtering by status, priority, assignee, tags
3. Progress Tracking: Visual indicators for task completion
4. User Management: Admin can manage users (add, edit, delete)

#### Security Measures

1. JWT Authentication: Secure token-based authentication
2. Role-based Access Control: Users only see/access what they're authorized for
3. Input Validation: Server-side validation for all inputs
4. Project Isolation: Users can only access projects they own or are shared with
5. Task Filtering: Tasks are filtered based on project access

#### Permission Matrix

Action	Owner	Editor	Viewer
Create Project	✓	✗	✗
Edit Project	✓	✗	✗
Delete Project	✓	✗	✗
Share Project	✓	✗	✗
Create Tasks	✓	✓	✗
Edit Tasks	✓	✓	✗
Delete Tasks	✓	✓	✗
View Tasks	✓	✓	✓

Action	Owner	Editor	Viewer
Add Comments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Technical Implementation Details

### Backend Features

- **Express.js** with middleware for authentication and validation
- **MongoDB** with Mongoose ODM for data modeling
- **JWT** for secure authentication
- **Role-based middleware** for access control
- **Comprehensive API** with CRUD operations
- **Data validation** using express-validator

### Frontend Features

- **React 18** with TypeScript for type safety
- **React Query** for server state management
- **React Router** for navigation
- **React Hook Form** for form handling
- **Tailwind CSS + DaisyUI** for modern UI
- **Responsive design** for all screen sizes

### Key Components

- **Authentication:** Login/Register with JWT
- **Dashboard:** Overview of projects and tasks
- **Project Management:** Create, edit, share projects
- **Task Management:** Create, edit, organize tasks with sub-tasks
- **User Management:** Admin interface for user management
- **Advanced Filtering:** Search and filter tasks by multiple criteria
- **Dashboard**
  - Project Overview: Displays all projects with progress bars.
  - Recent Tasks: Shows the 5 most recently created tasks.

## User Flow

- **Registration & Login**
  - New users register via the signup form.
  - Existing users log in with email and password.
  - Upon login, users are redirected to the dashboard.
- **Dashboard**
  - Users see an overview of their projects and recent tasks.
  - Can navigate to Projects, Profile, or Logout from the sidebar.
- **Project Management**
  - Users can create new projects.
  - Clicking a project opens the Project Details page.
- **Project Details**
  - Shows project info, task board (To Do, In Progress, Completed), and filter options.
  - Tasks can be added, edited, deleted, or moved between columns.
  - Overdue tasks are highlighted; completed-late tasks are shown in green.
  - Users can share the project with others by selecting from registered users and assigning a role.
- **Task Management**
  - Tasks are created with a name, description, status, and due date.
  - Status can be changed via drag-and-drop or a dropdown.
  - Filtering allows users to focus on specific tasks.
- **Profile Management**
  - Users can update their profile information and change their password.
- **Project Sharing**
  - Owners can share projects with other registered users.
  - The share modal lists all users in the system for selection.
  - Shared users appear in the “Shared With” list and can be removed.

## How Sharing Works

- Only registered users can be selected for sharing.
- The backend `/api/users` endpoint provides the user list.
- Owners assign roles (Owner, Editor, Viewer) when sharing.
- Shared users can access the project according to their role.

## How Filtering Works

- Users set filter criteria (status, date range, search).
- Clicking “Apply Filter” updates the task board.
- “Clear Filters” resets all filter fields.

## Create your account

Or [sign in to your account](#)

Full Name

Email address

Password

Confirm Password

Create account

## Sign in to your account


Or [create a new account](#)

Email address

Password

Sign in

## Task Manager

 Dashboard

 Projects

 Tasks

 Users

 Profile

localhost:5173

## Task Manager

 Dashboard

 Projects

 Tasks

 Users

 Profile

Logout

## Dashboard

+  
New Project

### Projects

[View all](#)

#### StudyNotion | Ed-Tech Platform

this project is provide a online flatform where teachers and students can interect.

/ tasks

#### project 1

demo decription of project 1

/ tasks

#### project 2

demo discription of project 2

/ tasks

### Recent Tasks

[View all](#)

#### Task 3

StudyNotion | Ed-Tech Platform

Done Due 6/18/2025

#### Task 2

StudyNotion | Ed-Tech Platform

In Progress Due 6/24/2025

#### Task 1

StudyNotion | Ed-Tech Platform

To Do Due 6/20/2025

## Profile

Update your account information and password

Full Name

Gurdeep Singh

Email Address

gurdeepmalewal00@gmail.com

### Change Password

Leave blank if you don't want to change your password

Current Password

New Password

Confirm New Password

Save Changes

No projects yet.

ed!

Create New Project

✕


Project Name

Description

Cancel

Create Project

## Task Manager

 Dashboard

 Projects

 Tasks

 Users

 Profile

Logout

## Projects

 New Project

### StudyNotion | Ed-Tech Platform

this project is provide a online flatform where teachers and students can interect.

Owner: Gurdeep Singh

Owner

Created: 6/18/2025

### project 1

demo decription of project 1

Owner: Gurdeep Singh

Owner

Created: 6/18/2025

### project 2






demo discription of project 2

Owner: Gurdeep Singh

Owner

Created: 6/18/2025

## Task Manager

-  Dashboard
-  Projects
-  Tasks
-  Users
-  Profile

Logout

### StudyNotion | Ed-Tech Platform

this project is provide a online platform where teachers and students can interect.

Edit Project

Delete Project

+ New Task

Share Project

Owner: Gurdeep Singh

Your Role: Owner

#### Filter Tasks

Status

All Status

Start Date

dd-mm-yyyy

End Date

dd-mm-yyyy

Search

Search tasks...

Clear Filters

Apply Filter

0 of 0 tasks

#### To Do

No tasks

#### In Progress

No tasks

#### Completed

No tasks

### Create New Task

Task Name

Task 1

Description

task 1 demo discription

Priority

High

Assignee

Gurdeep Singh

Due Date

20-06-2025

Estimated Hours

0

Tags

Enter tags separated by commas

Separate multiple tags with commas (e.g., bug, frontend, urgent)

Cancel

Create Task



Filter Tasks

Status

All Status

Priority

All Priorities

Assignee

All Assignees

Start Date

01-06-2025

End Date

30-06-2025

Tags

Filter by tags...

Search

Search tasks...

Clear Filters

Apply Filter

3 of 3 tasks

To Do

- Task 1

To Do

To Do

Due Jun 20, 2025
- Task 2

To Do

To Do

Due Jun 24, 2025
- Task 3

To Do

To Do

Due Jun 18, 2025

In Progress

No tasks

Completed

No tasks

Task Manager

- Dashboard
- Projects
- Tasks
- Users
- Profile

Logout

StudyNotion | Ed-Tech Platform

this project is provide a online platform where teachers and students can interact.

Owner: Gurdeep Singh

Edit Project

New Task

Your Role: Editor

Filter Tasks

Status

All Status

Priority

All Priorities

Assignee

All Assignees

Start Date

01-06-2025

End Date

30-06-2025

Tags

Filter by tags...

Search

Search tasks...

Clear Filters

Apply Filter

3 of 3 tasks

To Do

- Task 1

To Do

Medium

To Do

Due Jun 20, 2025

In Progress

- Task 2

In Progress

Medium

In Progress

Due Jun 24, 2025

Completed

- Task 3

Done

Medium

Completed

Due Jun 18, 2025

## All Tasks

### Task 3

task 3 demo discription

[StudyNotion | Ed-Tech Platform](#) Due: 6/18/2025

Done

### Task 2

task 2 demo discription

[StudyNotion | Ed-Tech Platform](#) Due: 6/24/2025

In Progress

### Task 1

task 1 demo discription

[StudyNotion | Ed-Tech Platform](#) Due: 6/20/2025

To Do

## Task Manager

 Dashboard

 Projects

 Tasks

 Users

 Profile









Logout

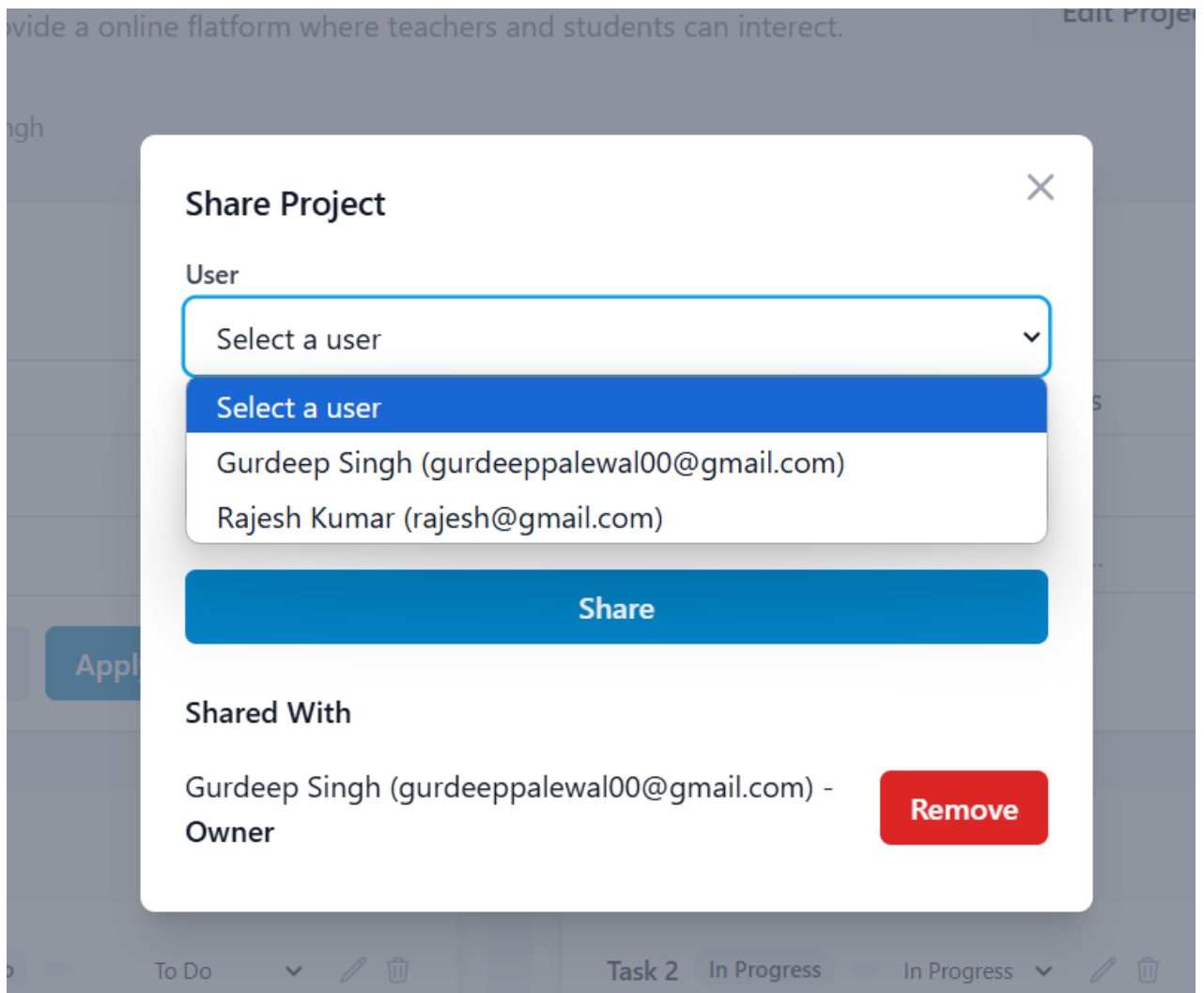
## Users Management

+  
Add User

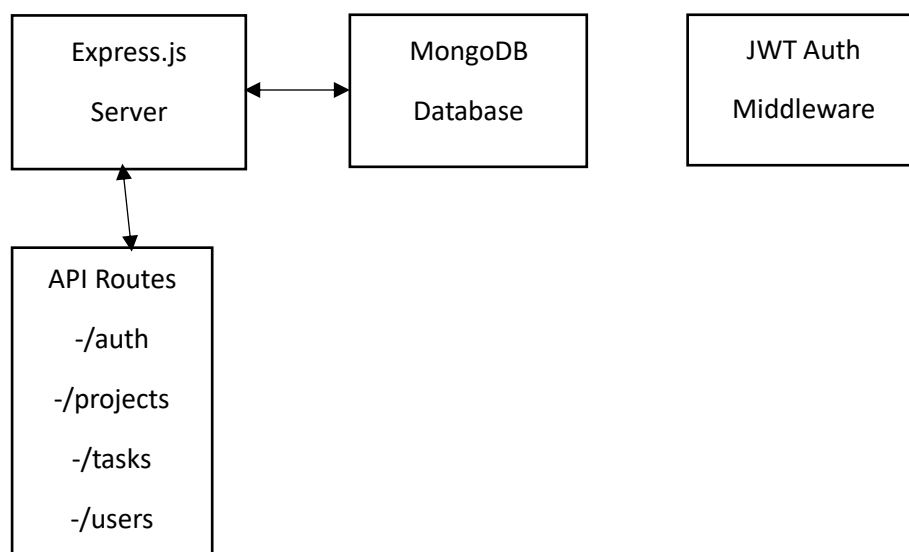
Search Users

Search by name or email...

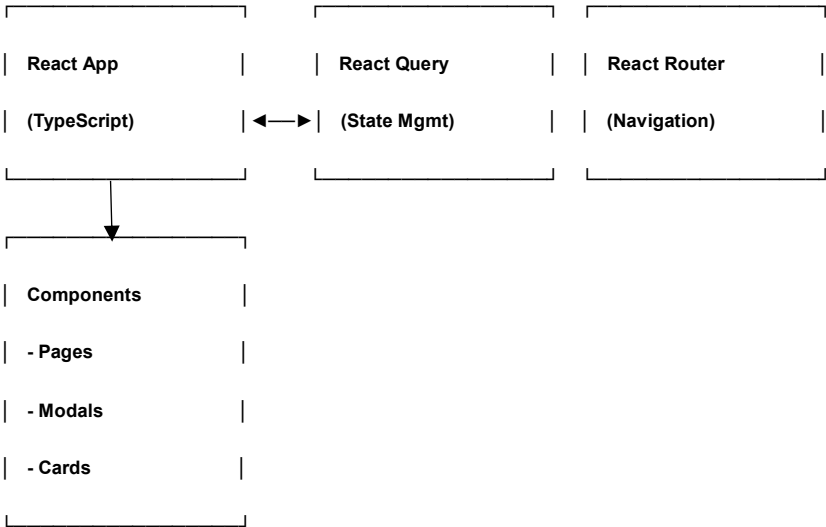
USER	EMAIL	CREATED	ACTIONS
 Gurdeep Singh	gurdeppalewal00@gmail.com	Invalid Date	  
 Rajesh Kumar	rajesh@gmail.com	Invalid Date	  



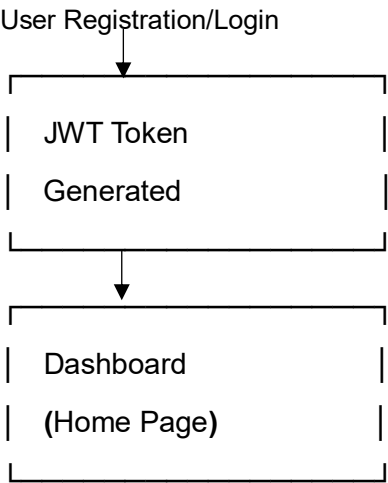
## Backend Architecture



Frontend Architecture

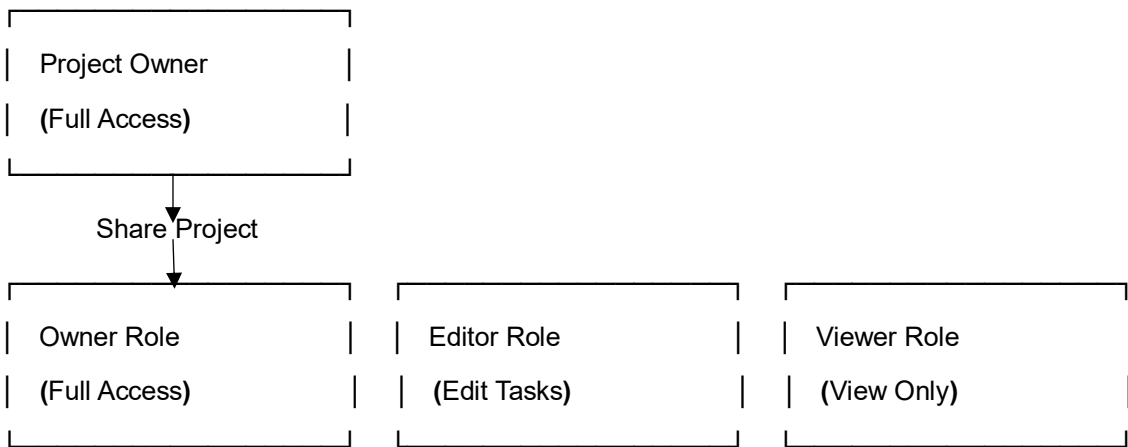


Authentication Flow



Project Management Flow

Create Project



Task Management Flow

