

Task Management System

Web - Application



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Manage all your task in one place!

Cloud-Based Task Manager

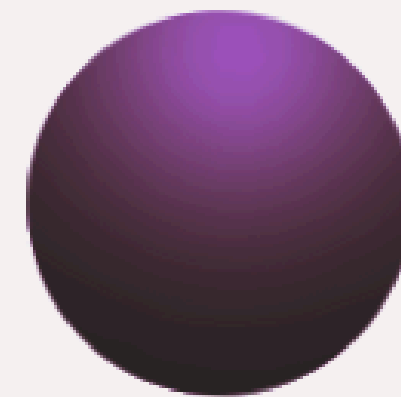


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01. Abstract

The Task Management System is a full-stack web application built using the MERN stack (MongoDB, Express.js, React.js, Node.js). It is designed to help teams manage tasks efficiently through features like task assignment, deadline tracking, real-time updates, and role-based access control. This project showcases the power of modern web technologies in solving real-world team coordination challenges.

02. Introduction

The Task Management System is aimed at helping teams and individuals organize, assign, and monitor tasks efficiently. With the increasing need for remote work and distributed teams, having a central tool to manage workflow becomes essential.

03. Basic Overview

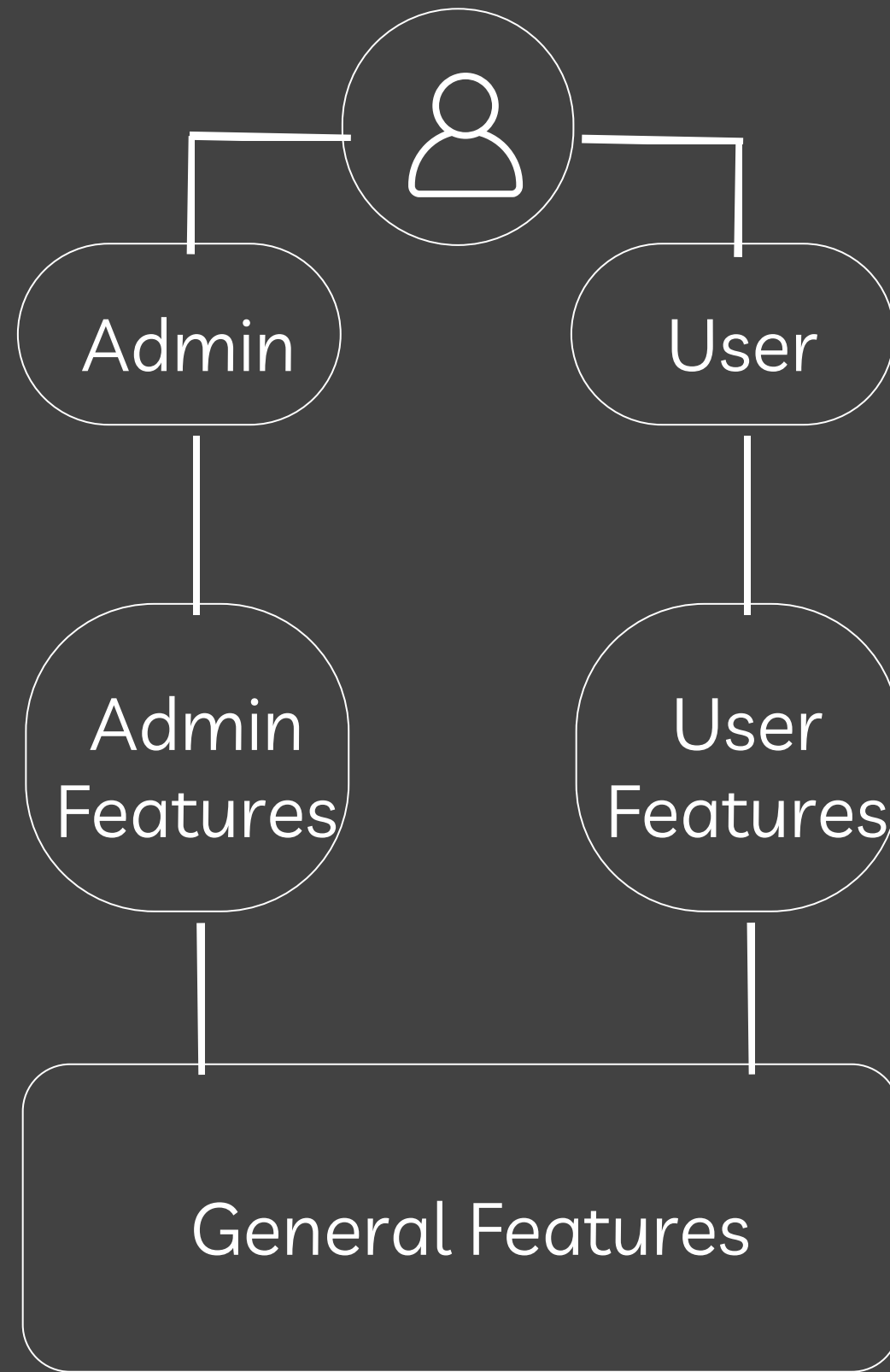
- A responsive web app built on MERN.
- Users can create, assign, edit, and delete tasks.
- Tasks have statuses (e.g., To-do, In Progress, Completed).
- Real-time updates, secure login, role-based access, and detailed analytics.

04. Project Description

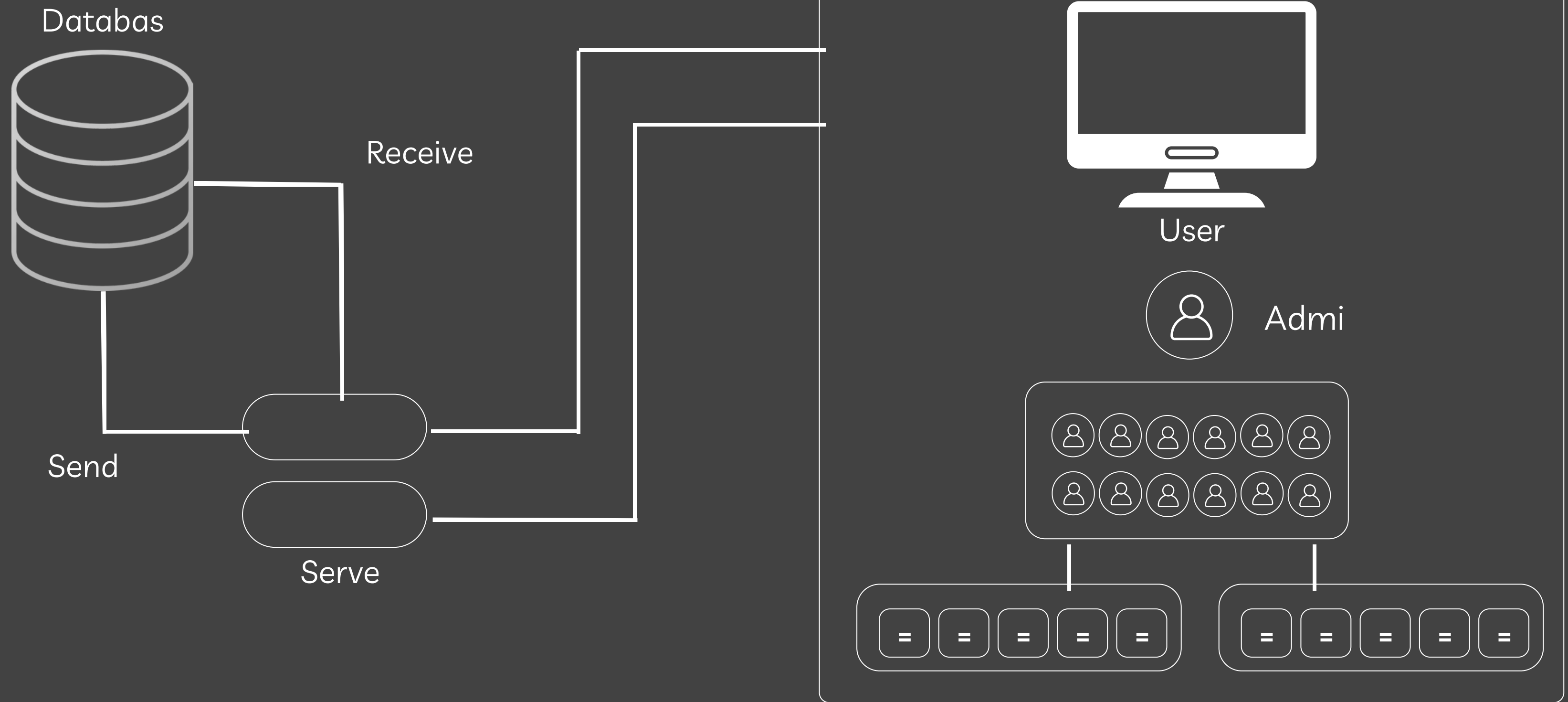
This system allows for:

- Creating user accounts and logging in securely.
- Assigning tasks with deadlines and priority levels.
- Monitoring task progress using visual indicators.
- Collaborating via comments and real-time updates.
- Admins controlling access with permissions.

05. Flow Chart - 1



05. Flow Chart - 2



06. Tech Stack

- Frontend: React.js
- Backend: Node.js, Express.js
- Database: MongoDB
- Other Tools: JWT (authentication), Redux (state management), CSS/Tailwind (styling), Mongoose (ODM)

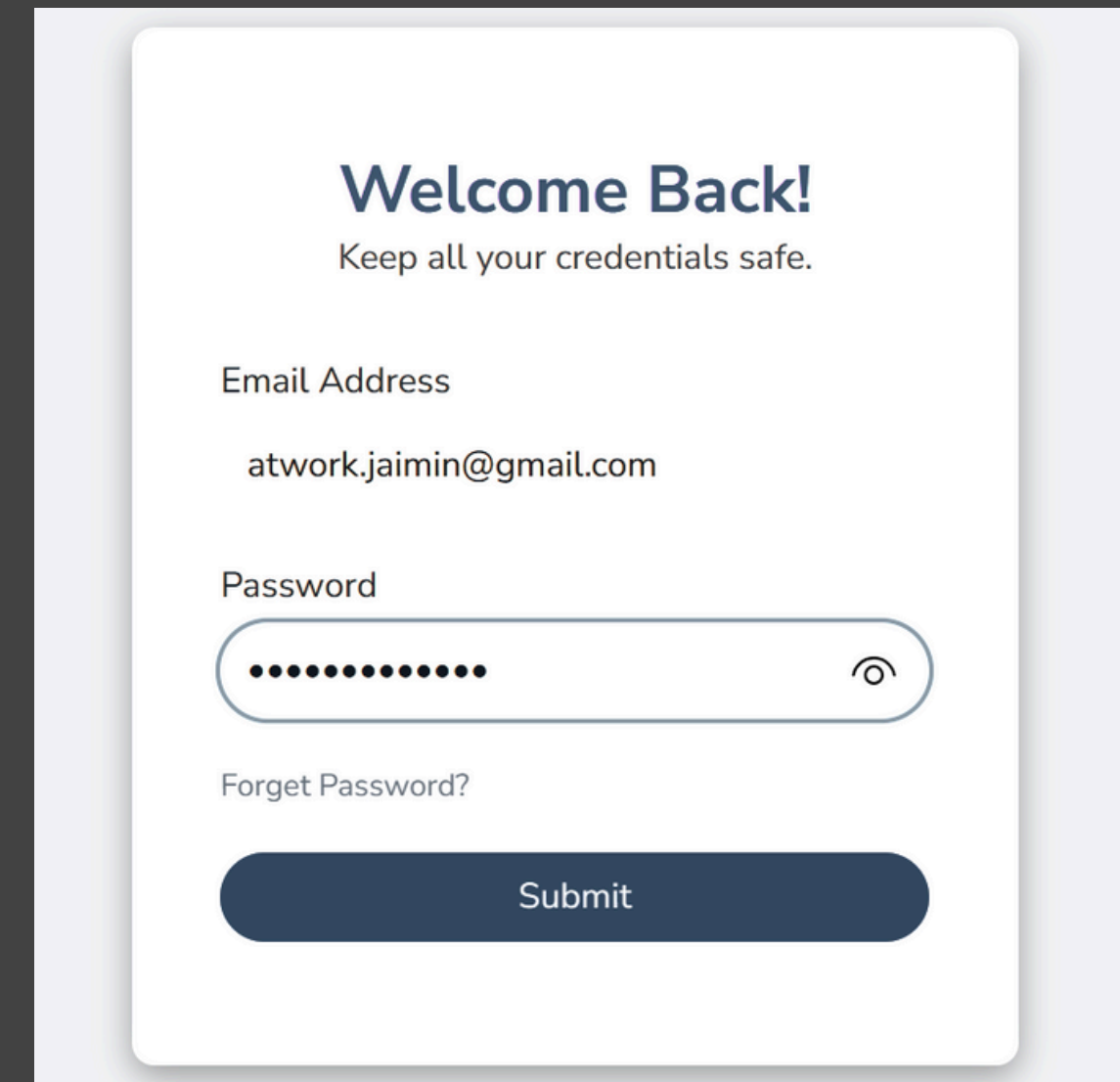
07. Implementation

- Frontend uses React components for a modular design.
- Backend API routes handle task CRUD operations and user authentication.
- MongoDB stores user data, task details, and activity logs.
- Authentication is handled with JWT tokens.
- Authorization ensures different access levels (Admin, Editor, Viewer).

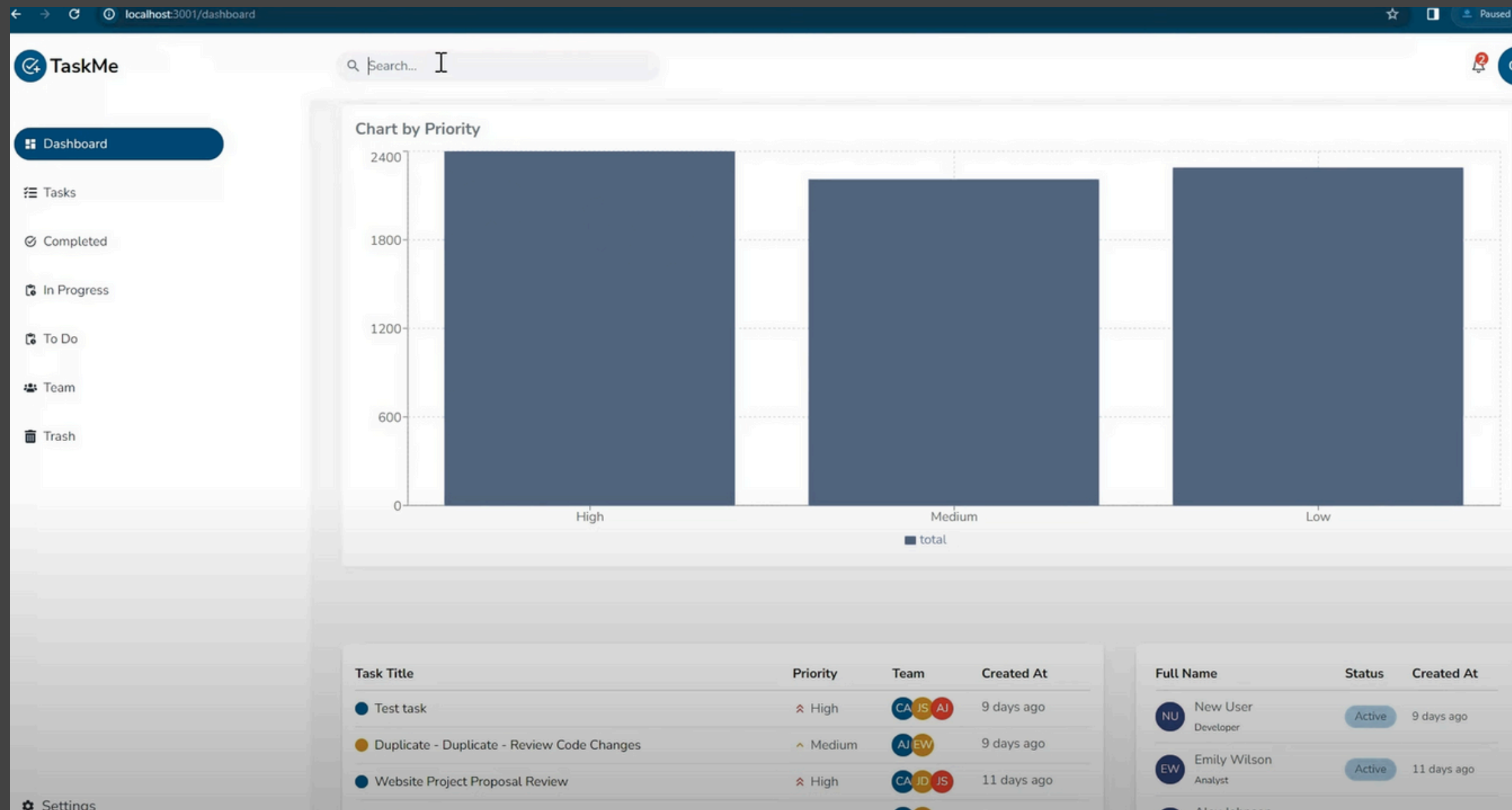
08. Key Benefits

- Streamlined Task Workflow
- Real-Time Updates
- Role-Based Access Control
- Responsive UI
- Secure Data Handling
- Collaboration in One Place

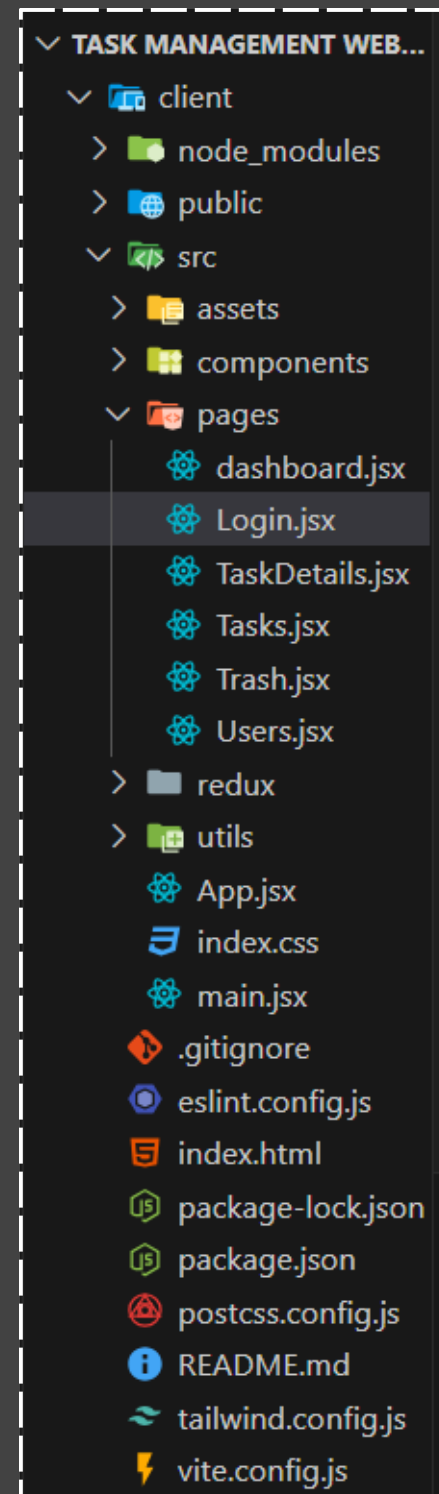
09. User Interface - 1



09. User Interface - 2



10. Code Snapshots - 1



```
client > src > pages > Login.jsx > ...
1  import React, { useEffect } from 'react'
2  import {useForm} from "react-hook-form"
3  import { useNavigate } from 'react-router-dom';
4  import Textbox from "../components/Textbox";
5  import Button from "../components/Button";
6
7  const Login = () => {
8    const user = "";
9    const {
10      register,
11      handleSubmit,
12      formState: { errors },
13    } = useForm();
14
15    const navigate = useNavigate();
16
17    const submitHandlebar = async (data) => {
18      console.log("submit");
19    }
20    useEffect(()=> {
21      user && navigate("/dashboard");
22    }, [user]);
23
24    return (
25      <div className='w-full min-h-screen flex items-center justify-center flex-col lg:flex-row bg-[#f3f4f6]'>
26        <div className='w-full md:w-auto flex gap-0 md:gap-40 flex-col md:flex-row items-center justify-center'>
27          <div className='h-full w-full lg:w-2/3 flex flex-col items-center justify-center'>...
28        </div>
29        <div className='w-full md:w-1/3 p-4 md:p-1 flex flex-col justify-center items-center'>
30          <form onSubmit={handleSubmit(submitHandlebar)}
31            className='form-container w-full md:w-[400px] flex flex-col gap-y-8 bg-white px-10 pt-14 pb-14'>
32            <div className='' >
33              <p className='text-blue-600 text-3xl font-bold text-center'> Welcome Back!
34            </p>
35          </div>
36        </div>
37      </div>
38    );
39  }
40
```

10. Code Snapshots - 2

```
Button.jsx X
D:\Jaimin Development\Task Management Web App\client\src\components\Button.jsx
1  import React from 'react'
2  import clsx from 'clsx';
3  ⚡
4  const Button = ({icon , className, label , type , onClick=() =>
5  {} }) => {
6    return (<button
7      type={type || "button"} className={clsx("px-3 py-2 outline-none rounded", className)}>
8      <span>{label}</span>
9      {icon && icon}
10     </button>
11   );
12 };
13
14 export default Button
```

10. Code Snapshots - 3

```
Textbox.jsx X
client > src > components > Textbox.jsx > Textbox > React.forwardRef() callback
1  import React from 'react';
2  import clsx from "clsx"
3
4  const Textbox = React.forwardRef(({
5    type, placeholder ,label , className , register , name , error},
6    ref)=> {
7    return (
8      <div className='w-full flex flex-col gap-1'>
9        {label && (
10         <label htmlFor={name} className='text-slate-800'>{label}
11         </label>
12       )}
13
14       <div>
15         <input
16           type={type}
17           name = {name}
18           placeholder={placeholder}
19           ref={ref}
20           {...register}
21           aria-invalid={error ? "true" : "false" }
22           className={clsx (
23             "bg-transparent px-3 py-2.5 2xl:py-3 border border-gray-300 placeholder-gray-400 text-gray-900 outline-none text-base focus:ring-blue-300" , className
24           )}
25         />
26       </div>
27       {error && (
28         <span className='text-xs text-[#f64949fe] mt-0.5'>{error}
29         </span>
30       )}
31     </div>
32   );
33 }
34 );
```

11. Merits & Demerits

- Merits:
- Efficient task distribution
- Centralized management
- Scalable architecture
- Intuitive UI
- Secure and reliable
- Demerits:
- Limited offline functionality
- Requires initial setup and hosting
- No mobile app (web-only)

12. Features

- Task Assignment & Prioritization:
- Deadline Tracking & Notification:
- Progress Reporting:
- Role-Based Permissions:
- Real-Time Collaboration:
- Secure Authentication & Authorization:

13. Short Explanation

The Task Management System Web App helps individuals and teams manage their daily tasks efficiently. It focuses on transparency, accountability, and productivity through a combination of intuitive UI and powerful backend logic using the MERN stack.

14. Conclusion

The Task Management Web-App project demonstrates the use of full-stack web development to solve real-world productivity challenges. With flexibility, scalability, and security, it can serve teams of any size, making it a valuable tool in today's work environments.

Thank You !