

Student Task Deadline Tracker

This project is a **Student Task Deadline Tracker** application built using **React**, **TypeScript**, and **Vite** on the client side, and **Node.js** with **Express** on the server side. It helps students manage their courses and tasks efficiently by tracking deadlines and providing CRUD functionality for courses and tasks.

Features

- **Course Management:** Add, edit, delete, and view courses.
- **Task Management:** Add, edit, delete, and view tasks associated with courses.
- **Authentication:** User authentication to ensure data privacy.
- **Responsive Design:** Optimized for both desktop and mobile devices.

Tech Stack

Client

- **React:** Frontend library for building user interfaces.
- **TypeScript:** Strongly typed JavaScript for better code quality.
- **Vite:** Fast build tool for modern web projects.
- **CSS:** Styling for the application.

Server

- **Node.js:** Backend runtime environment.
- **Express:** Web framework for building RESTful APIs.
- **MongoDB:** NoSQL database for storing courses and tasks.

Installation

Prerequisites

- Node.js (v16 or higher)
- npm or yarn
- MongoDB instance

Steps

1. Clone the repository:

```
git clone https://github.com/AhnaIfti/comp6002-25s2-g1-  
studenttaskdeadlinetracker  
cd student-task-deadline-tracker
```

2. Install dependencies for both client and server:

```
cd client
npm install
cd ../server
npm install
```

3. Set up environment variables:

- Create a `.env` file in the `server` directory.
- Add the following variables:

```
MONGO_URI=your-mongodb-uri
JWT_SECRET=your-secret-key
PORT=5000
```

4. Start the development servers:

- Start the server:

```
cd server
npm run dev
```

- Start the client:

```
cd client
npm run dev
```

5. Open the application in your browser:

```
http://localhost:5173
```

Scripts

Client

- `npm run dev`: Start the development server.

Server

- `npm run dev`: Start the development server with hot reload.

Folder Structure

```

comp6002-25s2-g1-studenttaskdeadlinetracker/
├── client/                # Frontend code
│   ├── src/              # React components and logic
│   └── public/           # Static assets
├── server/               # Backend code
│   ├── src/              # Express controllers, models, and routes
│   │   ├── controllers/  # API controllers
│   │   ├── models/       # Mongoose models
│   │   ├── routes/       # API routes
│   │   └── middleware/   # Custom middleware for authentication, error
│   │                       handling, etc.
│   ├── index.ts          # Entry point for the server application
│   └── README.md         # Server README
├── .env                  # Example environment variables
├── package.json          # Project metadata and dependencies
└── README.md             # Main project README

```

Contributing

1. Fork the repository.
2. Create a new branch:

```
git checkout -b feature-name
```

3. Commit your changes:

```
git commit -m "Add feature description"
```

4. Push to the branch:

```
git push origin feature-name
```

5. Open a pull request.

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