

PedalStart - Task Management Application

Project Title: PedalStart - Task Management Application

Description

PedalStart is a task management application designed to help users create, view, edit, and delete tasks. The application consists of a frontend built with React and a backend powered by Node.js and Express, with data stored in a MongoDB database. This application demonstrates a full-stack implementation with RESTful APIs and a responsive user interface.

Links

- **Live Site Link:** http://pedalstart.s3-website-us-east-1.amazonaws.com/
- **GitHub Repository:** https://github.com/Ac-11/PedalStart-**TaskManagementApplication**
- **Backend API:** http://18.205.252.53:5000/api/tasks
- Demo Video Link: https://drive.google.com/file/d/1q6sBr2eNhHectlb2G91SfgFeToEkcNBd/view

Technologies Used

• Frontend: React, Bootstrap • Backend: Node.js, Express

• Database: MongoDB

• Deployment: AWS EC2, S3, Netlify

Features

- Add new tasks with title, description, and due date.
- View a list of all tasks.
- Edit existing tasks.
- Delete tasks.
- Responsive design for mobile and desktop views.



Installation Instructions

Backend Setup

1. Clone the repository:

```
git clone https://github.com/Ac-11/PedalStart-
TaskManagementApplication.git
cd PedalStart-TaskManagementApplication
```

2. Install dependencies:

```
npm install
```

3. **Set up environment variables:** Create a .env file in the root directory and add the following:

```
MONGODB_URI=mongodb://localhost:27017/your-database-name PORT=5000
```

4. Start the backend server:

```
pm2 start server.js
pm2 startup
pm2 save
```

Frontend Setup

1. Navigate to the client directory:

```
cd client
```

2. Install dependencies:

```
npm install
```

3. **Change API routes:** In the src folder, update the API URLs in the components to point to your backend server's IP address. For example, change:

```
const response = await axios.get('http://localhost:5000/api/tasks');
to:
const response = await axios.get('http://<your-backend-
ip>:5000/api/tasks');
```

4. Build the frontend:

```
npm run build
```



5. Serve the frontend:

```
pm2 serve build 3000 --spa
```

Deploying the Frontend on AWS S3

1. Create a new S3 bucket:

- o Name your bucket (e.g., pedalstart).
- o Enable static website hosting.
- o Upload the contents of the build folder to the S3 bucket.

2. Set permissions:

- o Go to the bucket permissions.
- o Add a bucket policy to make the contents publicly accessible.

3. Access your site:

o Note the S3 bucket endpoint and access your site using the given URL.

Usage Instructions

1. Adding a Task:

- o Click on "Add New Task".
- o Fill in the Title, Description, and Due Date.
- Click "Add Task".
- o If any field is empty, a browser pop-up will alert the user to fill in all fields.

2. Viewing Tasks:

- o The homepage displays a list of tasks.
- Click "View" to see the details of a task.

3. Editing a Task:

- o Click "Edit" next to the task you want to update.
- o Modify the Title, Description, or Due Date.
- o Click "Update Task".
- After successful update, you will be redirected to the task list page.

4. Deleting a Task:

- o Click "Delete" next to the task you want to remove.
- o Confirm the deletion by clicking "Yes".
- o After successful deletion, you will be redirected to the task list page.

Backend Changes

• **Database Connection:** Ensure the MongoDB connection string in server.js is set to your database:

```
mongoose.connect(process.env.MONGODB_URI, { useNewUrlParser: true,
    useUnifiedTopology: true });
```

• Server Port: Ensure the backend server listens on the port specified in the .env file:

```
const port = process.env.PORT || 5000;
app.listen(port, () => console.log(`Server running on port
${port}`));
```

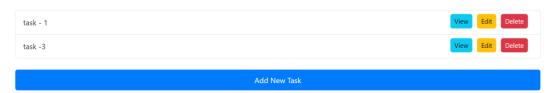


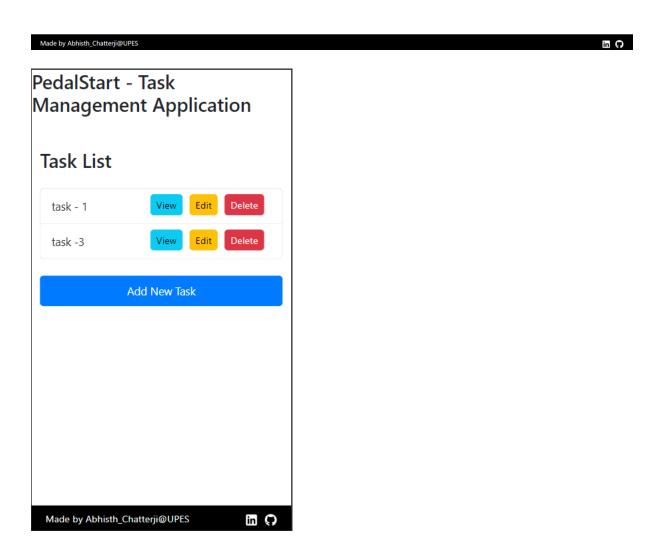
Screenshots on desktop and phone preview

1. Task List:

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Task List



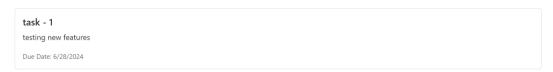




2. View Task:

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View Task



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View Task

task - 1

testing new features

Due Date: 6/28/2024

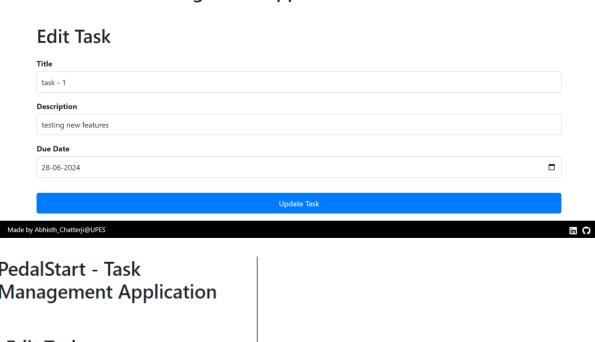
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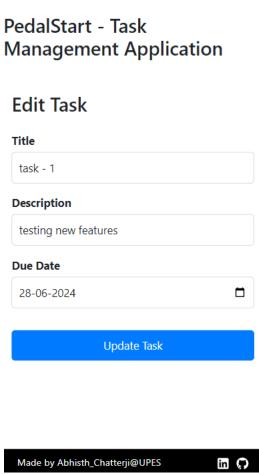




3. Edit Task:

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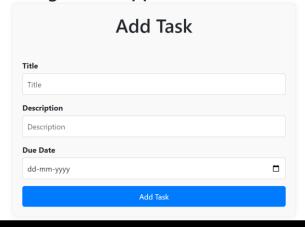






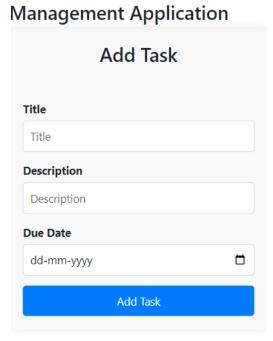
4. Add Task:

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PedalStart - Task





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5. Delete Task:

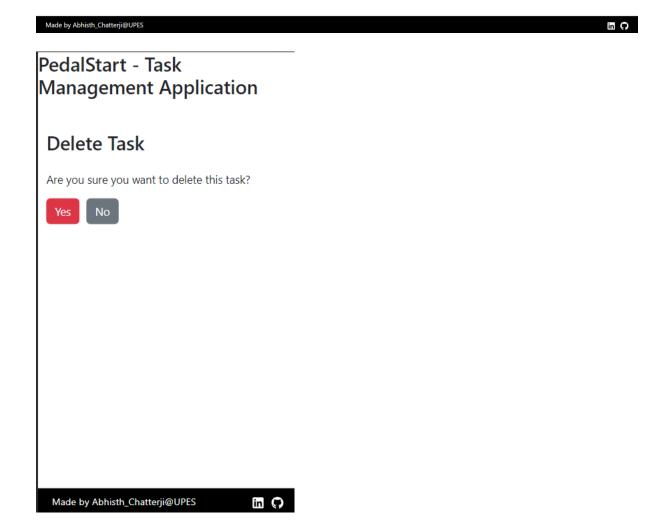
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Delete Task

Are you sure you want to delete this task?









Additional Notes

Design Choices

- **Responsive Design:** The application is designed to be responsive, ensuring usability on both mobile and desktop devices.
- **User Experience:** Browser pop-ups are used for validation and confirmation to provide immediate feedback to the user.

Challenges Faced

- **API Integration:** Ensuring the frontend communicates effectively with the backend, especially when deployed on different servers.
- **Deployment:** Configuring the EC2 instance and S3 bucket for seamless deployment.

Future Improvements

- **Authentication:** Implement user authentication to secure the application.
- Advanced Features: Add features like task categorization, priority settings, and notifications.
- **Enhanced UI:** Improve the user interface with more interactive elements and animations.