Fullstack web developer task - July 2025

Headless Technologies Ltd.

We have an interesting assignment for you that will allow you to exhibit your talents in constructing complex apps utilizing the MERN (MongoDB, Express.js, React, Node.js) stack. You will be creating a **note organizer application**.

Task Overview:

The objective is to design a note organizer that allows users to manage and categorize their notes efficiently. The application should demonstrate your knowledge of the MERN stack while also providing a user-friendly experience.

Technical Requirements:

1. **Backend Development:**
   - Create a RESTful API for managing CRUD actions (Create, Read, Update, Delete) on notes and categories using **Node.js and Express.js**.
   - To store notes and categories, use **MongoDB** as the database.
   - Implement server-side data validation and error handling.

2. **Frontend Development:**
   - Create a user-friendly and responsive UI for the application using **React**.
   - Create and implement components for note creation, viewing, updating, and deletion.

3. **User Authentication:**
   - To safeguard user data, implement user registration and login features.
   - Only authorized users should be able to create, modify, and remove notes.

4. **Features:**
   - Allow users to categorize their notes for better organization.
   - Implement note-filtering functionality depending on specified categories.
   - Include the option to add photos and link them to notes.
   - Use pagination to show notes in a more user-friendly manner.

5. **Search Functionality & UX:**
   - Create a search function that allows users to look for individual notes based on titles or content.
   - Include features like autosave for a smooth note-taking experience.

6. **Bonus Task (Optional):**
    ○ Write unit tests for important components and backend API endpoints using your preferred testing framework (e.g., Jest, Mocha, Chai).

Note:

** Using **typescript** is mandatory.

** You must submit a link to your work - use a git cloud service like Github or Gitlab.

** Submit links if you deploy your work to a cloud service

Best wishes, and we look forward to evaluating your excellent work!