Canary Mail Fullstack Developer Assignment

Objective

Build a simple Todo web application with a **React + Shadcn UI** frontend and a **Python backend**, using **SQLite** for persistent local data storage. Our internal team completed a similar version in approximately **one hour**. No login or authentication is required. Please see submission requirements below.

Due: 11:59pm, Tuesday, 10th June 2025

Requirements

1. Frontend

- Use **React** and **Shadcn UI** (https://ui.shadcn.com) for UI components and styling.
- Implement a clean, responsive, and user-friendly interface for managing todos.
- Support the full set of **CRUD operations**: create, read, update, and delete.
- You're encouraged to showcase your creativity in the UI/UX design and implementation.
- **Recommended Boilerplate:**
  https://github.com/canarymail/canary-frontend-boilerplate

2. Backend

- Use **Python** with any modern web framework such as **FastAPI**, **Sanic**, **Flask**, or **Django**.
- Develop a **RESTful API** for handling CRUD operations for todos.
- Use **SQLite** as the local database.
- Include a `requirements.txt` with all Python dependencies.
- Add a `README.md` specifying the Python version and setup instructions.
- **Recommended Boilerplate:**
  https://github.com/canarymail/canary-backend-boilerplate

3. Code Quality

- Write **clean, modular, and well-structured code** for both frontend and backend.
- Follow best practices including:
  - Proper error handling in backend APIs
  - Descriptive variable and function names
  - Concise, meaningful comments where necessary

4. Submission

Package the entire project into a **single zip file** containing:

- **Frontend code** (React + Shadcn UI)
- **Backend code** (Python + RESTful API)
- A `README.md` file with step-by-step setup instructions

Your `README.md` must include:

- Python version used
- How to create a virtual environment and install dependencies from `requirements.txt`
- Commands to start the backend server and frontend app
  Any additional setup steps (e.g., SQLite DB config)

  Do not include:

  - `.gitignore` files
  - `node_modules/` or Python package directories like `__pycache__/` or `env/`

Submit your solutions to info@canarymail.io via email with subject "**[FullStack] Assignment Submission**"

Technical Constraints

- **Frontend:** React with **Shadcn UI** only (no other UI libraries or frameworks)
- **Backend:** Python (3.8+) with any framework of your choice
- **Database:** SQLite (locally configured)
- **No authentication or login** functionality required
- The app must be fully **functional and testable locally** by following your `README.md` instructions