Full-Stack Coding Assignment – HRMS Lite

Overview

You are required to design and develop a **lightweight Human Resource Management System (HRMS Lite)**.

This assignment is intended to evaluate your **end-to-end full-stack development skills**, including:

- Frontend development
- Backend API design
- Database modeling & persistence
- Error handling & validations
- Deployment and production readiness

The scope is intentionally limited so that it can be completed **within 6-8 hours.**
The focus should be on delivering a **clean, stable, and functional application**, not on building excessive features.

Problem Statement

Build a **web-based HRMS Lite application** that allows an admin to:

- Manage employee records
- Track daily attendance

The system should simulate a **basic internal HR tool**, focusing on essential HR operations with a **simple, usable, and professional interface**.

Functional Requirements

1. Employee Management

The application should allow the admin to:

- Add a new employee with the following details:
    - Employee ID (unique)

    - Full Name
    - Email Address
    - Department
- View a list of all employees
- Delete an employee

2. Attendance Management

The application should allow the admin to:

- Mark attendance for an employee with:
    - Date
    - Status (Present / Absent)
- View attendance records for each employee

Backend & Database Requirements

- Implement **RESTful APIs** for all functionalities
- Persist data using a **database** (SQL or NoSQL)
- Perform **basic server-side validation**
    - Required fields
    - Valid email format
    - Duplicate employee handling
- Handle invalid requests and errors **gracefully**
    - Proper HTTP status codes
    - Meaningful error messages

Constraints & Guidelines

- Assume a **single admin user** (no authentication required)
- Leave management, payroll, and advanced HR features are **out of scope**
- Frontend UI should resemble a **professional, production-ready website**
- Expectations for UI:
    - Clean layout
    - Proper spacing
    - Consistent typography
    - Intuitive navigation
- Use **reusable components**
- Show meaningful UI states:
    - Loading
    - Empty states
    - Error states
- Code should be:

    - Readable
    - Modular
    - Well-structured
- The application should be **realistically usable**, not just a demo

Deployment (Mandatory)

You **must deploy** the application and share:

1. **Live Frontend URL**
    - The application must be publicly accessible
2. **Hosted Backend API**
    - Backend must be deployed
    - Frontend should be connected to the live backend
3. **GitHub Repository Link**
    - Must contain the complete source code (frontend + backend)

⚠️ **Important:**
The deployed application should run **without errors** using the shared links.

Submission Requirements

Please submit the following:

1. **Live Application URL**
2. **GitHub Repository Link**
3. **README.md** file containing:
    - Project overview
    - Tech stack used
    - Steps to run the project locally
    - Assumptions or limitations (if any)

Bonus (Optional)

You may implement one or more of the following:

- Filter attendance records by date
- Display total present days per employee
- Basic dashboard summary (counts or tables)

Bonus features will be considered **only if the core functionality is complete and stable**.

Recommended Tech Stack (Flexible)

You are free to choose your stack. Example:

Frontend

- JavaScript
- React / Angular / Vue

Backend

- Python: Django / FastAPI

Database

- MongoDB
  OR
- PostgreSQL / MySQL

Deployment

- Vercel / Netlify (Frontend)
- Render / Railway /(Backend)

Time Expectation

- Estimated completion time: **within 6-8 hours**
- Over-engineering is **not required**
- A **clean, working solution** is preferred over extra features

Important Note

This assignment is designed to assess **practical full-stack development skills**.

- Incomplete implementations
- Missing deployments
- Broken links or non-working applications

may result in the assignment **not being evaluated**.

Good Luck!

We look forward to reviewing your solution 🚀