BACKEND ENGINEER

Take-home Assignment

I. OVERVIEW

This take-home assignment is designed to assess your skills in backend development, with a focus on technologies such as Node.js, Python, Express, and Django. It's a comprehensive task that will allow you to demonstrate your proficiency in building REST APIs and handling data management operations.

II. DETAILS

Objective:

Assess skills in backend development, specifically in Node.js, Python, Express, and Django.

Time Required:

3 hours

Technology Stack:

- Node.js
- Python
- Express.js
- Django

Tasks:

API with Express and Node.js

- Create a simple REST API using Express.
- Implement CRUD operations for a "User" resource.

Web Server with Django and Python

- Create a Django web server with one model, e.g., "Product".
- Implement CRUD operations via Django's admin interface.

API-to-Database Connection

- Connect your Express API to a SQLite database using any ORM.
- Store and retrieve "User" data.

API Proxy with Python

- Create a Python script that acts as a proxy.
- Forward requests from the Python script to the Express API.

Integration

- Make the Django web server fetch "User" data from the Express API via the Python proxy.

Deliverables:

- Source code for the Express and Node.js API.
- Source code for the Django web server.
- Python script for the API proxy.
- README file with instructions for running the code and performing CRUD operations.

Evaluation Criteria:

- Code Quality: Readability, structure, modularity
- API Functionality: Correct implementation of CRUD operations
- Database Connection: Efficacy in connecting API to SQLite database
- Proxy Functionality: Successful data forwarding from Python to Express API
- Integration: Successful data fetch from Express API to Django server

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III. SUBMISSION

- Create a Git repository for your project.
- Include a README with instructions on how to run the app and any additional information you'd like to provide.
- Share the Git repository link with us for evaluation.
- The deadline for submission is **48 hours**.
- You need to upload your assignment and then **send a public Github link to** hr@gethomebase.com to submit your take-home assignment.