Python Intern Assignment Adstacks Media

We are excited to evaluate your skills with this practical assignment. This will test your proficiency in Python, backend development, database management, virtual Android system creation, and basic networking concepts.

Task 1: Backend Development

- Create a Python-based API using **Flask** or **Django**.
- The API should include the following endpoints:
    1. **POST /add-app:** Add app details to the database (fields: app_name, version, description).
    2. **GET /get-app/{id}:** Retrieve app details by ID.
    3. **DELETE /delete-app/{id}:** Remove an app by ID.

Deliverables:

- The API codebase.
- A README.md file explaining how to set up and run the API locally.

Task 2: Database Management

- Design a simple SQLite or PostgreSQL database to store app information (app_name, version, description).
- Integrate the database with the API developed in Task 1.

Deliverables:

- The database schema file.
- Sample data to test the API.

Task 3: Virtual Android System Simulation

- Write a Python script that simulates a **virtual Android system** capable of running basic tasks. The script should:
    1. Create a virtual Android environment using Python libraries like **QEMU** or **Android Emulator Plugin**.
    2. Launch the virtual system and display a terminal or GUI interface.
    3. Install a sample app (e.g., an APK file) into the virtual system.
    4. Retrieve and log system information (e.g., OS version, device model, available memory).

Deliverables:

- Python script(s) for setting up and managing the virtual Android system.
- A README.md file explaining:
    - How to run the script.
    - How to install an app on the virtual system.
    - A summary of the system information logged.

Python Intern Assignment 

Task 4: Basic Networking

- Write a Python script that connects the virtual Android system to a backend server. The script should:
    1. Establish a TCP or HTTP connection with the server.
    2. Send mock data from the virtual Android system (e.g., device ID, system info) to the backend API created in Task 1.
    3. Receive and log the server's response.

Deliverables:

- The networking script.
- A brief explanation of how the script works.

Submission Guidelines:

- Submit all code files in a single ZIP folder named YourName_PythonInternAssignment.zip.
- Include a README.md file with instructions for running each task.
- Ensure your code is well-documented and follows best practices.

Deadline: 2 Days

ALL THE BEST !!