Lab test-3

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**Question-1:**

**Prompt**:

Create a Flask backend API for an education app.

It should have endpoints to:

1. List available courses.

2. Get a specific course by ID.

3. Generate a short question and answer for a given topic and difficulty.

Use simple, clear Python code.

**Code**:

A screenshot of a computer program

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

**Output**:A screenshot of a computer

AI-generated content may be incorrect.

**Observation:**

* The code runs locally and doesn’t need a real AI API — good for demos. The Flask-based education backend successfully demonstrates how AI can be integrated into backend API development.  
  It provides endpoints to manage course data and generate questions dynamically using an assisted function.  
  The project runs locally without external dependencies, making it easy to test and extend.

**Conclusion:**

* The Flask backend works well for generating AI-based questions and managing courses.. It’s simple, runs locally, and can easily be upgraded to use a real AI model for smarter educational content.

**Question-2:**

**Prompt**:

Create a Python program for a transportation company that calculates the average travel time between different routes.  
Add a function that gives suggestions to reduce delay times based on the average. Give clear python code.

**Code**:

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

**Output**:

A screen shot of a computer

AI-generated content may be incorrect.

**Observation**:

The program successfully calculates the average travel time and provides dynamic, suggestions based on the result. It simulates how transportation systems can analyze route data in real time to detect congestion levels. The results are clear and easy to interpret, making the system suitable for both small and large transportation networks.

**Conclusion**:

This simple transportation system show helps in analyzing traffic conditions and suggesting actions to reduce delays. It’s lightweight, runs locally, and can be easily extended to use real traffic data .