Assignment 2.5

# Lab 2: Additional AI Coding Tools and API Configurations

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* Subject – AI Assisted Coding
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Note: Report should be submitted a word document for all tasks in a single  
document with prompts, comments & code explanation, and output and if  
required, screenshots

Objective: To build a simple AI weather chatbot that fetches real-time weather data  
using the OpenWeatherMap API and responds to natural language queries using basic  
NLP techniques.

Suppose that you are working as a junior developer in an AI services startup. Your  
team is building a smart assistant for travelers to get weather updates by simply asking  
questions like “What’s the weather in Mumbai?” or “Is it raining in New York?”

Tasks to be completed are as below

1. API Configuration:  
● Register for a free OpenWeatherMap API key.  
● Read the documentation and test API calls using tools like Postman or Python  
requests.

2. NLP Integration:  
● Use spaCy or NLTK to extract city names from user input.  
● Convert natural language queries to appropriate API parameters

3. Chatbot Design:  
● Develop a basic chatbot using Python with user input and response cycles.  
● Integrate it with OpenWeatherMap API to display temperature, condition, and  
humidity.

Requirements:  
● VS Code with Github Copilot or Cursor API and/or Google Colab with Gemini

Deliverables:  
● A working Python script or notebook.  
● A short video demo or screenshot of chatbot interaction.  
● A markdown file with steps followed and challenges faced