

Lessonproject1

Python_basic_prompt.py

Explanation of the Code (Python_basic_prompt.py)

This script is a simple Python program to interact with **Ollama** (a local AI model runner) using the command line.

1. Importing Required Module

```
import subprocess
```

- `subprocess` is a built-in Python module that allows running system commands directly from Python.
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2. Function to Run Ollama Prompt

```
python
CopyEdit
def run_ollama_prompt(prompt, model="deepseek-r1:1.5b"):
    """Runs a prompt using Ollama CLI and returns the response."""
    command = ["ollama", "run", model, prompt]

    try:
        result = subprocess.run(command, capture_output=True, text=True, c
heck=True, encoding="utf-8")
        return result.stdout.strip()
    except subprocess.CalledProcessError as e:
        print("Error running Ollama:", e)
        return None
```

Key Points:

- The function `run_ollama_prompt` takes two parameters:
 - `prompt` → The input question to be asked.
 - `model` → The AI model to use (default: `"deepseek-r1:1.5b"`).

- **command** → The list representing the CLI command: This runs Ollama with the specified model and prompt.

```
["ollama", "run", model, prompt]
```

- **subprocess.run()** :
 - **capture_output=True** → Captures the model's response.
 - **text=True** → Ensures the output is returned as a string.
 - **check=True** → Raises an error if the command fails.
 - **encoding="utf-8"** → Ensures proper text encoding.
- **Exception Handling:**
 - If the command fails, it prints an error message.

3. Running the Script

```
if __name__ == "__main__":  
    prompt = "What is the capital of France?"  
    response = run_ollama_prompt(prompt)  
  
    if response:  
        print("Response:", response)  
    else:  
        print("Failed to get a response.")
```

Key Points:

- Checks if the script is run directly (`if __name__ == "__main__":`).
- Sets a default question: `"What is the capital of France?"`
- Calls the function `run_ollama_prompt(prompt)` .
- Prints the response if it exists; otherwise, prints an error message.

Example Output

If the AI model is running correctly, the script will print:

Response: Paris

If there's an error (e.g., Ollama is not installed), it will print:

Error running Ollama: [Error details]
Failed to get a response.

How to Use

1. Ensure **Ollama** is installed (`ollama` command should work in the terminal).
2. Run the script using:

```
python Python_basic_prompt.py
```

3. Modify `prompt` in the script or take user input dynamically.
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Enhancements

- Accept **user input** instead of a hardcoded prompt:

```
prompt = input("Enter your question: ")
```

- Handle **different models** by modifying the `model` parameter.
- Log responses for further analysis.