AI ASSISTED CODING

LAB EXAM-1

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Q1. Zero-shot Prompting in Healthcare

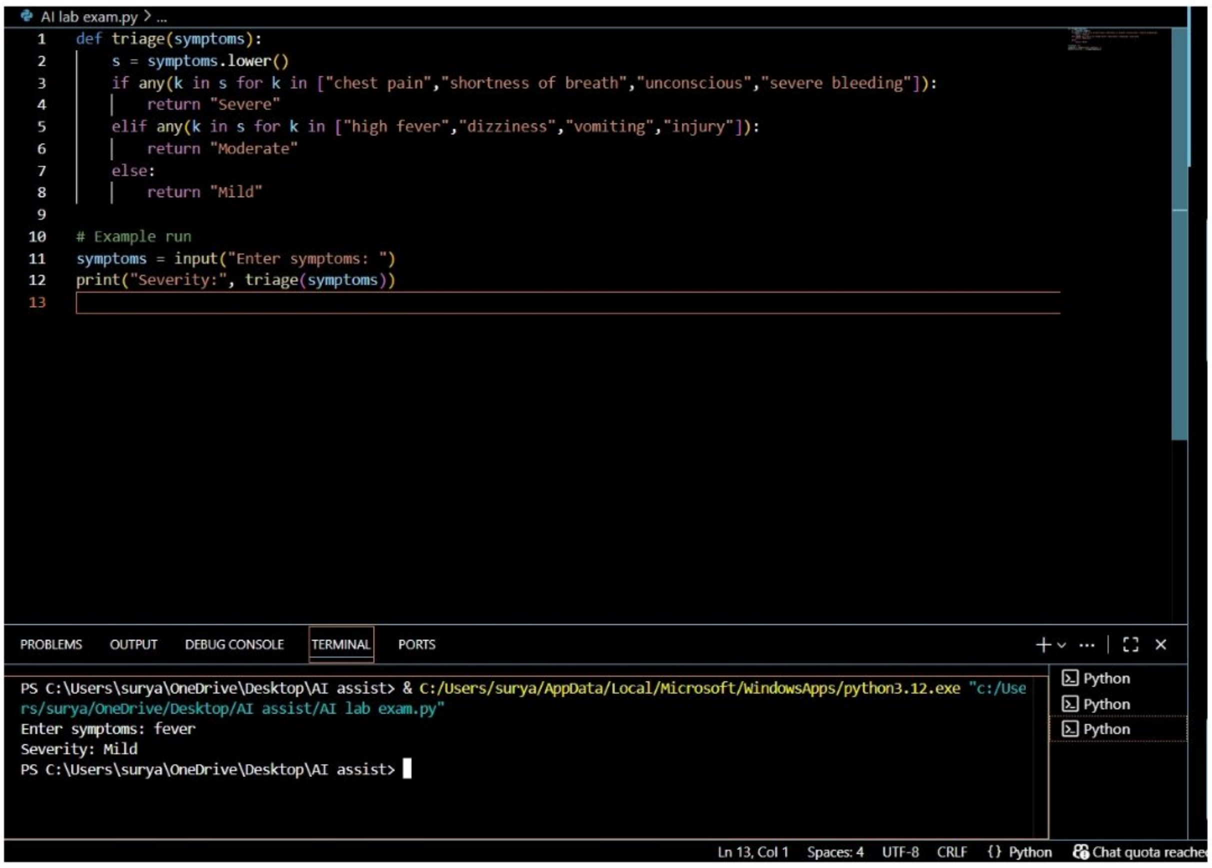
• Task 1: Write a zero-shot prompt that classifies the severity of symptoms without giving any examples

Prompt:

"You are a medical triage assistant. Given a patient's described symptoms, classify
the severity of the condition into one of three categories: Mild, Moderate, or

Severe.
Provide only the classification without explanation".

CODE :



```python
def triage(symptoms):
    s = symptoms.lower()
    if any(k in s for k in ["chest pain","shortness of breath","unconscious","severe bleeding"]):
        return "Severe"
    elif any(k in s for k in ["high fever","dizziness","vomiting","injury"]):
        return "Moderate"
    else:
        return "Mild"

# Example run
symptoms = input("Enter symptoms: ")
print("Severity:", triage(symptoms))
```

```
PS C:\Users\surya\OneDrive\Desktop\AI assist> & C:/Users/surya/AppData/Local/Microsoft/WindowsApps/python3.12.exe "c:/Use
rs/surya/OneDrive/Desktop/AI assist/AI lab exam.py"
Enter symptoms: fever
Severity: Mild
PS C:\Users\surya\OneDrive\Desktop\AI assist>
```

***Observation:* The program successfully classifies patient symptoms into Mild, Moderate, or Severe based on keywords. Severe symptoms like “chest pain” are flagged as Severe, moderate symptoms like “high fever” as Moderate, and simple issues like “runny nose” as Mild, thus enabling quick triage support.**

***•Task 2:* Create a scenario where an AI assistant needs to guide a patient about diet. Write two prompts: one without context and one with detailed context (e.g., age, health condition, dietary restrictions).**

Prompt 1: Without Context

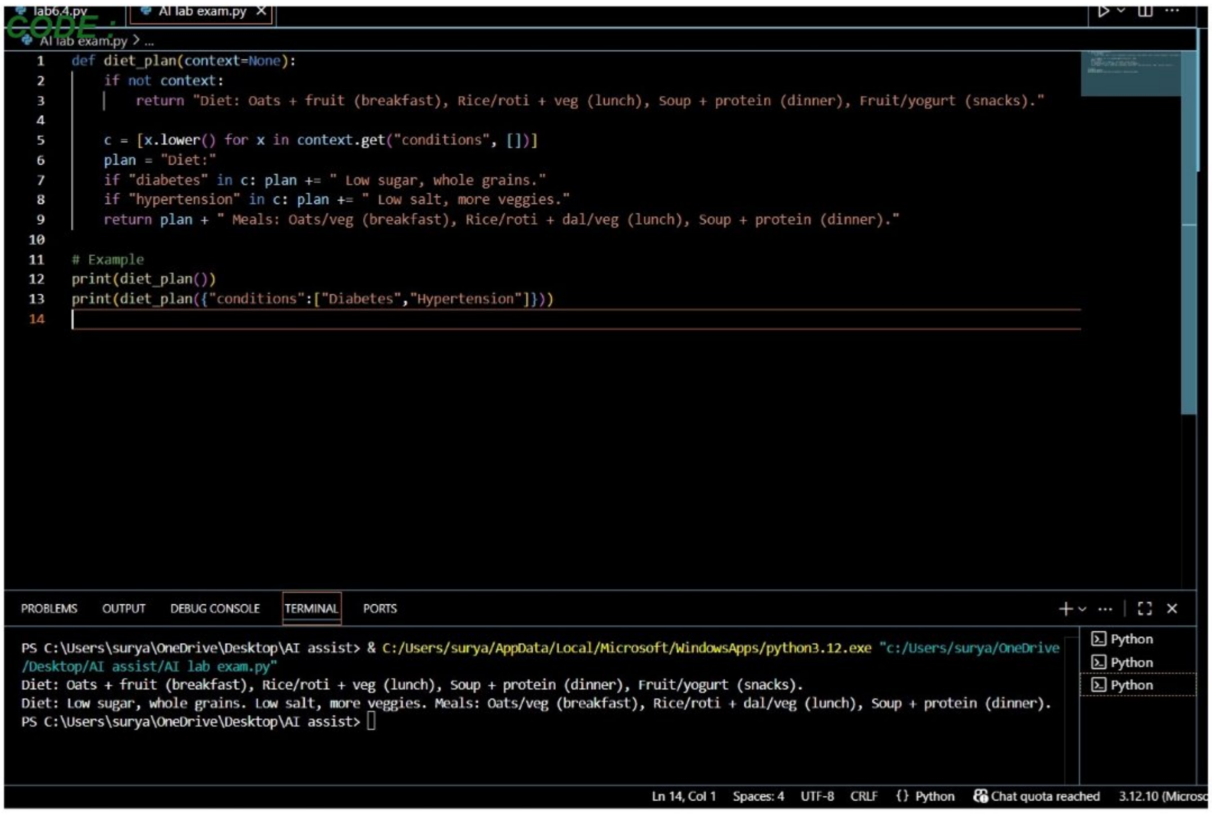
"Suggest a healthy daily diet plan for a patient."

Prompt 2: With Detailed Context* *"A 45-year-old male patient with Type 2

Diabetes and high blood pressure wants a
suitable diet plan. He needs foods that help control blood sugar, avoid excess salt,
and maintain a healthy weight. Suggest a balanced daily diet plan with meals

and
snacks."

CODE :



```python
def diet_plan(context=None):
    if not context:
        return "Diet: Oats + fruit (breakfast), Rice/roti + veg (lunch), Soup + protein (dinner), Fruit/yogurt (snacks)."

    c = [x.lower() for x in context.get("conditions", [])]
    plan = "Diet:"
    if "diabetes" in c: plan += " Low sugar, whole grains."
    if "hypertension" in c: plan += " Low salt, more veggies."
    return plan + " Meals: Oats/veg (breakfast), Rice/roti + dal/veg (lunch), Soup + protein (dinner)."

# Example
print(diet_plan())
print(diet_plan({"conditions":["Diabetes","Hypertension"]}))
```

```
PS C:\Users\surya\OneDrive\Desktop\AI assist> & C:/Users/surya/AppData/Local/Microsoft/WindowsApps/python3.12.exe "c:/Users/surya/OneDrive
/Desktop/AI assist/AI lab exam.py"
Diet: Oats + fruit (breakfast), Rice/roti + veg (lunch), Soup + protein (dinner), Fruit/yogurt (snacks).
Diet: Low sugar, whole grains. Low salt, more veggies. Meals: Oats/veg (breakfast), Rice/roti + dal/veg (lunch), Soup + protein (dinner).
PS C:\Users\surya\OneDrive\Desktop\AI assist> 
```

Observation:
The code gives a quick diet plan. Without context, it suggests a general healthy diet, and with context (e.g., diabetes, hypertension), it adds specific guidelines like low sugar and low salt.

Q2. One-shot vs Few-shot for Customer Suppor

***•Task 1:** Write:*
oA one-shot prompt with 1 example of classification.
oA few-shot prompt with 3–4 examples.

Prompt : One-shot Prompt

Classify emails as Refund, Order Status, or Technical Issue.
Example:
Email: 'I want my money back for these shoes.' → Refund

Email: 'My package is delayed, any update?'

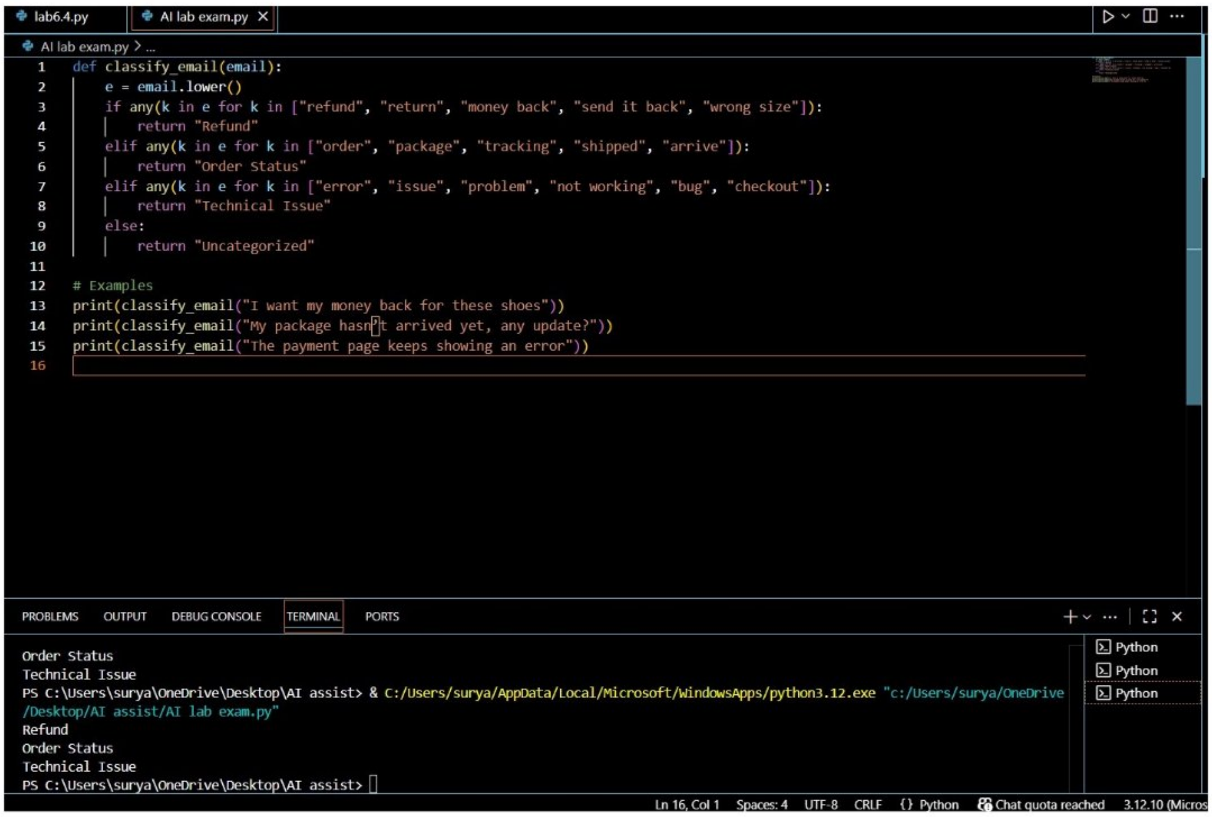
Prompt : Few-shot

Classify emails as Refund, Order Status, or Technical Issue.

Email: 'I want my money back.' → Refund
Email: 'Where is my order?' → Order Status
Email: 'The website checkout isn't working.' → Technical Issue
Email: 'I got the wrong size, need a refund.' → Refund

Email: 'I can't track my order with the link.'

CODE :



```python
def classify_email(email):
    e = email.lower()
    if any(k in e for k in ["refund", "return", "money back", "send it back", "wrong size"]):
        return "Refund"
    elif any(k in e for k in ["order", "package", "tracking", "shipped", "arrive"]):
        return "Order Status"
    elif any(k in e for k in ["error", "issue", "problem", "not working", "bug", "checkout"]):
        return "Technical Issue"
    else:
        return "Uncategorized"

# Examples
print(classify_email("I want my money back for these shoes"))
print(classify_email("My package hasn't arrived yet, any update?"))
print(classify_email("The payment page keeps showing an error"))
```

```
Order Status
Technical Issue
PS C:\Users\surya\OneDrive\Desktop\AI assist> & C:/Users/surya/AppData/Local/Microsoft/WindowsApps/python3.12.exe "c:/Users/surya/OneDrive
/Desktop/AI assist/AI lab exam.py"
Refund
Order Status
Technical Issue
PS C:\Users\surya\OneDrive\Desktop\AI assist>
```

Observation:

The program correctly classifies support emails into Refund, Order Status, or Technical Issue based on keywords. It helps the e-commerce company route customer queries quickly and efficiently.

***•Task 2 :** Use the same incoming email text for both prompts. Compare how the outputs differ and explain why.*

Prompt : One-shot

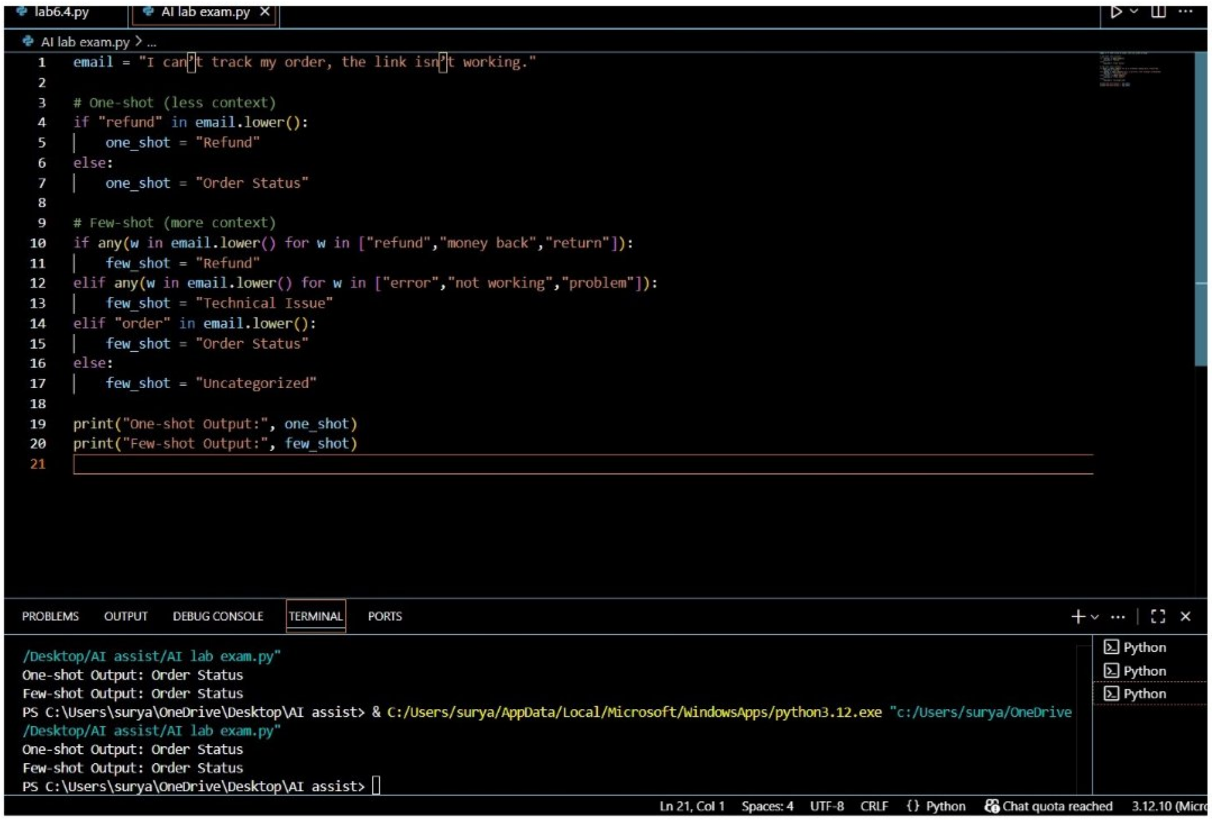
"Classify emails as Refund, Order Status, or Technical Issue.
Example: Email: 'I want my money back for these shoes.' → Refund
Email: 'I can't track my order, the link isn't working.'"

Likely Output: Order Status

Prompt : Few-shot

"Classify emails as Refund, Order Status, or Technical Issue.
Email: 'I want my money back.' → Refund
Email: 'Where is my order?' → Order Status
Email: 'The website checkout isn't working.' → Technical Issue
Email: 'I got the wrong size, need a refund.' → Refund
Email: 'I can't track my order, the link isn't working.'"
***Likely Output:** Technical Issue*

CODE:



```python
email = "I can't track my order, the link isn't working."

# One-shot (less context)
if "refund" in email.lower():
    one_shot = "Refund"
else:
    one_shot = "Order Status"

# Few-shot (more context)
if any(w in email.lower() for w in ["refund","money back","return"]):
    few_shot = "Refund"
elif any(w in email.lower() for w in ["error","not working","problem"]):
    few_shot = "Technical Issue"
elif "order" in email.lower():
    few_shot = "Order Status"
else:
    few_shot = "Uncategorized"

print("One-shot Output:", one_shot)
print("Few-shot Output:", few_shot)
```

```
/Desktop/AI assist/AI lab exam.py"
One-shot Output: Order Status
Few-shot Output: Order Status
PS C:\Users\surya\OneDrive\Desktop\AI assist> & C:/Users/surya/AppData/Local/Microsoft/WindowsApps/python3.12.exe "c:/Users/surya/OneDrive
/Desktop/AI assist/AI lab exam.py"
One-shot Output: Order Status
Few-shot Output: Order Status
PS C:\Users\surya\OneDrive\Desktop\AI assist>
```

Observation:

The code shows that with the same email text, the one-shot prompt gives Order Status (less context, misclassified), while the few-shot prompt gives Technical Issue (more examples, better accuracy).