Expert system (hospital)

def triage\_system():

print("=== Hospital Expert System: Patient Triage Assistant ===")

name = input("Enter Patient Name: ")

age = int(input("Enter Age: "))

print("\nSelect Symptoms (Y/N):")

chest\_pain = input("Chest Pain? ").lower() == 'y'

short\_breath = input("Shortness of Breath? ").lower() == 'y'

bleeding = input("Heavy Bleeding? ").lower() == 'y'

high\_fever = input("High Fever? ").lower() == 'y'

injury = input("Recent Injury? ").lower() == 'y'

dizziness = input("Dizziness or Fainting? ").lower() == 'y'

stomach\_pain = input("Severe Stomach Pain? ").lower() == 'y'

print("\nAnalyzing symptoms...")

if bleeding or injury:

department = "Emergency Room (ER)"

advice = "Immediate attention required. Proceed to the ER."

elif chest\_pain or short\_breath:

department = "Cardiology"

advice = "Cardiac symptoms detected. Visit Cardiology immediately."

elif high\_fever and age < 12:

department = "Pediatrics"

advice = "High fever in child. Visit Pediatrics urgently."

elif high\_fever:

department = "General Medicine"

advice = "Consult a general physician for evaluation."

elif dizziness:

department = "Neurology"

advice = "Neurological symptoms present. Visit Neurology."

elif stomach\_pain:

department = "Gastroenterology"

advice = "Visit a gastroenterologist for further diagnosis."

else:

department = "Outpatient (OPD)"

advice = "No critical symptoms. You may proceed to OPD."

print(f"\n=== Patient Report ===")

print(f"Name: {name}")

print(f"Recommended Department: {department}")

print(f"Advice: {advice}")

if \_\_name\_\_ == "\_\_main\_\_":

triage\_system()

theory

This program is a simple expert system designed to assist hospital staff in triaging patients—determining the urgency and appropriate department based on symptoms.

It simulates a rule-based decision-making system that takes patient inputs and provides automated medical direction.

🔁 Working Process:

Input Collection:

The system asks for the patient's name and age.

It then asks Yes/No questions about symptoms such as:

Chest pain

Shortness of breath

Heavy bleeding

High fever

Injury

Dizziness

Stomach pain

Symptom Analysis (Rules/Conditions):

Based on the symptom combinations, the system checks rules in priority order:

Emergency Room (ER): For bleeding or injury.

Cardiology: For chest pain or breathlessness.

Pediatrics: For high fever in children under 12.

General Medicine: For high fever in adults.

Neurology: For dizziness or fainting.

Gastroenterology: For severe stomach pain.

OPD (Outpatient Department): If none of the above symptoms exist.

Output:

Prints a patient report with:

Name

Suggested department

Advice or urgency level