Expert system (employee)

def evaluate\_employee():

print("=== Expert System: Employee Performance Evaluation ===")

name = input("Enter Employee Name: ")

role = input("Enter Role/Department: ")

print("\nRate the following on a scale of 1 (Poor) to 5 (Excellent):")

teamwork = int(input("Teamwork: "))

punctuality = int(input("Punctuality: "))

task\_completion = int(input("Task Completion: "))

communication = int(input("Communication Skills: "))

problem\_solving = int(input("Problem Solving: "))

leadership = int(input("Leadership (if applicable, else rate as 3): "))

total\_score = teamwork + punctuality + task\_completion + communication + problem\_solving + leadership

average\_score = total\_score / 6

if average\_score >= 4.5:

remark = "Outstanding"

suggestion = "Keep up the great work. Consider for leadership roles or promotions."

elif average\_score >= 3.5:

remark = "Good"

suggestion = "Consistent performance. Minor improvements will boost further."

elif average\_score >= 2.5:

remark = "Average"

suggestion = "Needs improvement in some areas. Consider targeted training."

else:

remark = "Below Average"

suggestion = "Immediate attention needed. Schedule a performance review and support plan."

print("\n=== Performance Report ===")

print(f"Employee Name: {name}")

print(f"Department/Role: {role}")

print(f"Average Score: {average\_score:.2f}/5")

print(f"Performance Remark: {remark}")

print(f"Recommendation: {suggestion}")

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

evaluate\_employee()

theory

This program acts as a simple expert system that evaluates an employee's performance based on ratings given for key attributes. It automates feedback and suggestions using logical conditions and scoring.

🔁 Working Process:

User Input:

Asks for:

Employee Name

Role or Department

Then, the evaluator provides ratings (1 to 5) on:

Teamwork

Punctuality

Task Completion

Communication Skills

Problem Solving

Leadership (or default as 3)

Score Calculation:

Total score is the sum of all 6 ratings.

Average score is calculated by dividing the total score by 6.

Evaluation Logic (Rule-Based):

Based on the average score:

≥ 4.5: Outstanding – promotion-worthy

≥ 3.5: Good – slight improvements recommended

≥ 2.5: Average – needs improvement/training

< 2.5: Below Average – requires urgent review

Output Report:

Displays:

Name and Role

Average score

Performance remark

Personalized recommendation

🧠 Key Concepts Used:

Expert System Logic: Uses fixed rules to provide automated evaluations and suggestions.

Simple AI Evaluation: Mimics basic Human Resource evaluation methods.

Condition-based Feedback: Uses if-elif statements to classify performance.