Expert system (stock market)

def stock\_trading\_expert():

print("=== Stock Market Trading Expert System ===")

name = input("Enter your name: ")

print(f"\nWelcome, {name}! Please answer the following questions:")

market\_trend = input("Is the market currently bullish (rising)? (yes/no): ").lower()

company\_growth = input("Is the company showing strong financial growth? (yes/no): ").lower()

news\_sentiment = input("Is the recent news about the company positive? (yes/no): ").lower()

risk\_tolerance = input("What is your risk tolerance? (low/medium/high): ").lower()

print("\nAnalyzing your inputs...")

if market\_trend == "yes" and company\_growth == "yes" and news\_sentiment == "yes":

if risk\_tolerance == "high":

advice = "Strong Buy – High growth expected, good for aggressive investors."

elif risk\_tolerance == "medium":

advice = "Buy – Stock is favorable, but invest moderately."

else:

advice = "Consider Buying – Favorable conditions, but proceed cautiously."

elif news\_sentiment == "no" and risk\_tolerance == "low":

advice = "Avoid – Negative news and low risk tolerance do not mix."

elif market\_trend == "no":

advice = "Hold or Sell – Bearish market, consider reducing exposure."

else:

advice = "Monitor – Conditions are mixed. Wait for clearer signals."

print("\n=== Trading Suggestion ===")

print(f"Name: {name}")

print(f"Suggestion: {advice}")

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

stock\_trading\_expert()

What is it?

A Stock Market Trading Expert System is a rule-based AI tool that provides buy/sell/hold suggestions to users based on market conditions and user input.

🧠 Components:

Component Description

Knowledge Base Contains rules like “If market is bullish and company is growing → Buy.”

Inference Engine Applies rules to the user's input to give recommendations

User Interface Accepts user inputs (e.g., market trend, company status) and gives output

✅ Applications:

Helps new investors make informed decisions

Reduces emotional bias in trading

Acts as a decision support tool for portfolio managers

⚙ Example Rules:

Condition Action

Market is Bullish + Company Growth + Positive News → Buy

Market is Bearish → Hold or Sell

Bad News + Low Risk → Avoid

🎯 Benefits:

Easy to use for beginners

Makes consistent decisions

Fast and cost-effective guidance