

AI ALIA – An Initiative by SOFTECH

Professional Learning Solutions

Course Information

Course Title: Prompt Engineering
Module: Chain-of-Thought & Reasoning
Lesson: What is chain-of-thought prompting?
Exercise Type: Scenario-Based Assessment
Difficulty Level: Beginner
Estimated Completion Time: 30 Minutes

Learning Objectives

After completing this exercise, the learner will be able to:

- Define Prompt Engineering clearly
 - Identify components of an effective prompt
 - Differentiate between weak and strong prompts
 - Apply structured prompting technique
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EXERCISE QUESTIONS

Exercise 1 – Identifying the Need for Chain-of-Thought

Scenario:

You are helping a student solve this question:

“A shop sells 12 pens per box. If a school buys 5 boxes, how many pens does the school get?”

The student directly asks AI:

“How many pens does the school get?”

Question:

1. Rewrite the prompt using Chain-of-Thought prompting.
 2. Why is your rewritten prompt better than the original one?
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✓ **Exercise 2 – Improving Logical Reasoning**

Scenario:

You are working on a budgeting task.

Problem:

“If you save ₹200 every week for 6 weeks, how much money will you save?”

You want the AI to clearly show the reasoning process.

Question:

1. Write a Chain-of-Thought prompt for this problem.
 2. What advantage does step-by-step reasoning provide in calculation-based tasks?
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✓ **Exercise 3 – Real-World Decision Scenario**

Scenario:

You are choosing between two internet plans:

Plan A: ₹500 per month for 3 months

Plan B: ₹450 per month for 4 months

You want to know which plan is cheaper overall.

Question:

1. Write a structured Chain-of-Thought prompt to compare both plans.
 2. Why is Chain-of-Thought prompting especially useful in decision-making tasks?
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🚩 Response Area

Answer 1:

Answer 2:

Answer 3:



📊 Evaluation Rubric

Criteria	Excellent	Good	Needs Improvement
Concept Clarity	Clear & well-articulated	Adequate	Limited
Prompt Structure	Fully structured	Partially structured	Weak
Practical Application	Professional & usable	Acceptable	Needs refinement
Analytical Thinking	Insightful	General	Basic