AI ALIA – An Initiative by SOFTECH

Professional Learning Solutions

Course Information

Course Title: Prompt Engineering

Module: Chain-of-Thought & Reasoning

Lesson: Breaking complex problems into steps

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

📝 **EXERCISE QUESTIONS**

✅ **Exercise 1 – Overloaded Prompt Scenario**

Scenario:

A student asks AI:

"A laptop costs ₹50,000. There is a 10% discount and then an additional ₹2,000 cashback. What is the final price?"

The student simply types:

"What is the final price?"

Question:

1. Rewrite this as a structured prompt using step-by-step reasoning.

2. Why is the original prompt considered overloaded?

✅ Exercise 2 – Designing the Thinking Process

Scenario:

You are solving this problem:

"A person saves ₹1,500 per month. After 8 months, they spend ₹3,000. How much money remains?"

You want to apply the professional 3-step structure:

- Understand the problem
- Identify required steps
- Solve step by step

Question:

Write a structured prompt that follows all three stages clearly.

✅ Exercise 3 – When NOT to Use Chain-of-Thought

Scenario:

A user asks AI the following questions:

1. What is 6 + 2?
2. What is the capital of Japan?
3. What is Artificial Intelligence?

Question:

1. Should Chain-of-Thought prompting be used for these questions?
2. Explain why or why not.

✍ **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