

AI ALIA – An Initiative by SOFTECH

Professional Learning Solutions

Course Information

Course Title: Prompt Engineering

Module: Prompt Components & Best Practices – Part 2

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:

- Formatting Control Challenge
 - JSON Formatting Scenario
 - Avoiding Ambiguity
 - Improve the Weak Prompt
 - Advanced Challenges: Compare & Analyze
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📄 EXERCISE QUESTIONS

Exercise 1:

Scenario:

You are building an AI tool for a startup founder.

The founder says:

“Give me business ideas in the health sector.”

But the output comes as a long paragraph, making it hard to read.

You want the AI to generate:

5 business ideas

In table format

With columns: Idea Name | Target Audience | Revenue Model | Initial Cost Level

Task:

Write a clear prompt that:

Specifies the table format

Clearly defines the columns
Limits the output to 5 ideas
Keeps explanations concise

Exercise 2:

Scenario:

You are integrating AI into a mobile app.

The app only accepts responses in JSON format.

User asks:

“Suggest a 7-day workout plan for beginners.”

You need the AI response to:

Be strictly in JSON

Include keys: day, workout_type, duration_minutes, difficulty

Contain exactly 7 entries

No extra explanation outside JSON

Task:

Write a precise prompt that ensures:

Valid JSON structure

No additional text

Clear field definitions

Exercise 3:

Scenario:

A student writes this prompt:

“Explain Java.”

The output is confusing because it talks about:

Java programming language

Java island

Coffee

Task:

Rewrite the prompt to:

Remove ambiguity

Specify context

Define target audience

Limit explanation length

Example situation:

The user wants:

Java programming language

For beginners

With one simple code example

Under 150 words.

Exercise 4:

Scenario:

Weak Prompt:

“Give me a diet plan.”

The result is too generic and not useful.

Task:

Rewrite it into a strong, best-practice prompt using:

Clear goal

User context (age, lifestyle, dietary preference)

Output structure (table or list)

Time duration

Calorie target

Example user profile:

28-year-old working professional

Vegetarian

Wants weight loss

1500 calories/day

Needs 7-day plan

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Exercise 4:

Scenario:

Prompt A:

“Write about artificial intelligence.”

Prompt B:

“Write a 200-word markdown-formatted article explaining artificial intelligence for business managers. Include:

- 3 real-world applications
- 1 risk
- A short conclusion.”

Task:

Identify why Prompt B produces better output.

Break down Prompt B into components:

- Instruction
- Context
- Output format
- Constraints

Rewrite Prompt A into a professional-level version.

Response Area

Answer 1:

Answer 2:

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Answer 3:

Answer 4:



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 **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 |