Assignment 06: Assignment and practice of Prompt Engineering to craft effective prompts.

Task 1: Prompt Categorization

1. **Prompt:** *"Generate a logo for a tech startup using neon colors."*
    - **Type:** Visual Prompt
    - **Reasoning:** It specifies image generation (a logo) with clear visual constraints (tech theme, neon colors).
2. **Prompt:** *"Explain blockchain to a 5-year-old."*
    - **Type:** Instructional Prompt
    - **Reasoning:** It asks for a simplified explanation suitable for a child, making it an instructional task.
3. **Prompt:** *"You are a UX designer. Suggest improvements to this app layout."*
    - **Type:** Role-based / Instructional Prompt
    - **Reasoning:** The role of UX designer is assigned, and the task requires structured suggestions.

Task 2: Refinement Practice

1. **Original Prompt:** *"Write a story."*

    - **Refined Prompt:** *"Write a 500-word short story for teenagers about a time-traveling student who visits ancient Egypt. Include suspense, dialogue, and a twist ending."*

2. **Original Prompt:** *"Explain AI."*

    - **Refined Prompt:** *"Explain Artificial Intelligence in 200 words for high school students. Use simple examples like Siri, chatbots, and self-driving cars."*

3. **Original Prompt:** *"Design a presentation."*

    - **Refined Prompt:** *"Create a 6-slide PowerPoint presentation for college students on 'Cybersecurity Threats in 2025.' Include slides on*
    - *Introduction*
    - *Types of Threats*
    - *Real-world Cases*
    - *Prevention*
    - *Future Trends*
    - *Conclusion.*

Task 3: Prompt Design Exercise

Five Original Prompts (different domains):

For ChatGPT (text-based):

"Act as a travel planner. Suggest a 5-day trip itinerary for a student budget traveler visiting Goa. Include affordable hotels, beaches, cultural spots, and food options."

For DALL·E (image-based):

"Generate a digital poster of a futuristic classroom where students are learning with holograms and AI robots, in a colorful cyberpunk style."

For SORA (video-based):

"Create a 12-second video of a dragon flying over a modern city skyline at night, breathing fire into the sky with cinematic lighting."

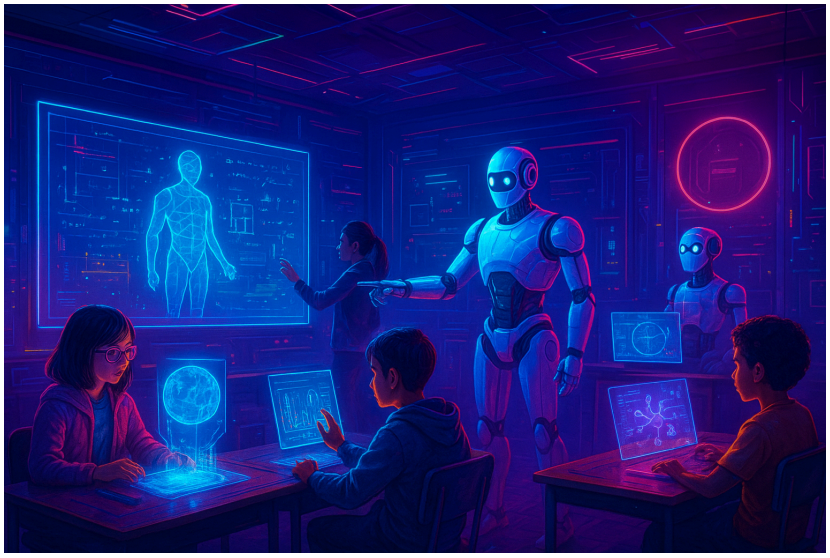
For Coding/Logic:

"Write a Python program that generates the Fibonacci sequence up to 20 terms and highlights the even numbers in the output."

For Education/Training:

"You are a physics teacher. Create a 10-question multiple-choice quiz for Class 11 students on Newton's Laws of Motion, with answer key included."

DALL·E (image-based)



Coding/Logic:

Generate and display the first 20 Fibonacci numbers, highlighting even ones.

def fibonacci(n=20):

    a, b = 0, 1

    seq = []

    for _ in range(n):

    seq.append(a)

    a, b = b, a + b

    return seq

```
def highlight(num):
        # Bold white text on blue background for evens
        if num % 2 == 0:
        return f"\033[1;97;44m{num}\033[0m"
        return str(num)
def mark_plain(num):

        return f"[{num}]" if num % 2 == 0 else str(num)
if __name__ == "__main__":
        seq = fibonacci(20)

        # Colored line (if your terminal supports ANSI colors)
        colored_line = ", ".join(highlight(n) for n in seq)
        print("Fibonacci (even numbers highlighted):")
        print(colored_line)

        # Plain-text fallback (no colors)
        plain_line = ", ".join(mark_plain(n) for n in seq)
        print("\nPlain text (even numbers in brackets):")
        print(plain_line)
```