**Ex.No: 4**

**SCENARIO-BASED REPORT DEVELOPMENT USING PROMPTING TECHNIQUES**

**AIM:**

To develop a scenario-based AI report using different prompting techniques such as **Comparative Analysis Prompt**, **Experiential Perspective Prompt**, **Everyday Functioning Prompt**, **Universal Prompt Structures**, **Prompt Refinements**, and to study the impact of **Prompt Size Limitations** on AI output.

**EXPLANATION:**

Scenario-based prompting helps AI models generate realistic, context-driven reports by simulating real-world situations.  
Prompt engineering techniques guide the AI to produce structured, coherent, and focused outputs aligned with user intent.

Each technique serves a distinct purpose:

* **Comparative Analysis Prompts** focus on comparing two or more entities.
* **Experiential Perspective Prompts** ask the model to write from a specific viewpoint or role.
* **Everyday Functioning Prompts** use daily-life scenarios to simplify explanations.
* **Universal Prompt Structures** provide general templates for consistency.
* **Prompt Refinements** improve clarity and specificity.
* **Prompt Size Limitations** refer to constraints caused by overly long or complex prompts that may reduce performance.

**SCENARIO:**

A company wants an AI-generated report comparing **online learning vs classroom learning**. The same scenario will be explored through different prompting methods.

**TYPES OF PROMPTING TECHNIQUES**

| **Technique** | **Description** | **Example Prompt** | **Example Output (Summary)** |
| --- | --- | --- | --- |
| **1. Comparative Analysis Prompt** | Encourages direct comparison between two subjects to highlight pros and cons. | “Compare online learning and classroom learning based on flexibility, cost, and student engagement.” | *Online learning offers flexibility and lower cost but may reduce engagement. Classroom learning provides structured interaction but limits scheduling flexibility.* |
| **2. Experiential Perspective Prompt** | Generates a response from a specific personal or professional viewpoint. | “As a college student, describe your experience with both online and in-person learning.” | *As a student, I find online classes convenient but sometimes isolating, while classroom sessions help me stay focused and socially connected.* |
| **3. Everyday Functioning Prompt** | Uses relatable, daily-life examples to simplify complex topics. | “Explain the difference between online and classroom learning as if you were describing it to a friend who prefers practical examples.” | *Learning online is like working from home—you control your pace. Classroom learning is like going to the office—you collaborate and stay motivated together.* |
| **4. Universal Prompt Structure** | Uses a general format like “Define → Explain → Example → Compare → Conclude.” | “Define both learning methods, explain their advantages, give examples, compare them, and conclude which is more effective.” | *Both methods enable education delivery. Online learning offers convenience; classroom learning offers engagement. A blended approach often works best.* |
| **5. Prompt Refinement** | Gradually improves the prompt for better results by adding context or constraints. | **Initial Prompt:** “Compare online and classroom learning.”  **Refined Prompt:** “Compare online and classroom learning for engineering students focusing on lab sessions, interaction, and time management.” | *The refined prompt yields a more targeted analysis focusing on practical difficulties faced by engineering students in online labs.* |
| **6. Prompt Size Limitations** | Examines how overly long or complex prompts affect model output quality. | **Too Long Prompt:** Includes multiple unrelated questions in one query.  **Effect:** Model gives incomplete or inconsistent answers. | *When the prompt exceeds recommended length or includes multiple topics, the model loses focus and produces fragmented output.* |

**RESULT:**

Thus, the scenario-based report was successfully generated using multiple prompting techniques. Each technique produced unique styles of AI responses, and the quality improved with prompt refinement and structured design.

**INFERENCE:**

Effective report generation using AI depends on **prompt clarity, context, and size**. Comparative and experiential prompts yield more engaging outputs, while universal structures and refinements enhance accuracy. Limiting prompt length ensures better coherence.