Learn Prompting by Examples- A Guide to Master Prompt Engineering

📌 1. Clarity and Specificity

- Use **clear, unambiguous language**.
- Specify **exactly what you want** (format, style, tone, output length, etc.).
- Avoid vague or open-ended questions unless brainstorming is your goal.

📌 *Examples:*

1. Instead of "Tell me about photosynthesis", use "Explain photosynthesis in simple terms suitable for a 10-year-old in under 100 words."
2. Instead of: "How does a car engine work?" Use: "Explain the basic four-stroke cycle of a gasoline car engine in a way that a high school student with no prior knowledge of mechanics can understand. Use an analogy to make it easier to grasp."
3. Instead of: "Create a recipe." Use: "Create a simple recipe for a vegan chocolate chip cookie. The recipe should use common ingredients, have a prep time of under 15 minutes, and include step-by-step instructions."
4. Instead of: "Give me some ideas for a blog post." Use: "Generate 5 blog post titles about the benefits of remote work for small businesses. The titles should be catchy and SEO-friendly, targeting an audience of entrepreneurs."
5. Instead of: "Write a marketing email." Use: "Write a marketing email to our existing customers about our new line of winter jackets. The tone should be exciting and persuasive, and the email should be no more than 200 words. Include a call-to-action to 'Shop Now' with a link to our website."
6. Instead of: "Summarize this document." Use: "Summarize the attached project proposal, focusing on the key objectives, timeline, and budget. The summary should be a single paragraph of about 150 words."

📌 2. Prompt Structure and Format

Understand the basic elements:

- **Instruction**: What should the model do?
- **Context**: Background info or reference data.
- **Examples (Few-shot)**: Model behaviour demonstrations.
- **Output format**: JSON, list, table, bullet points, etc.

📌 *Examples:*

1. You are a financial analyst.
   Task: Summarize this earnings report in 5 bullet points.
   Output format: Bullet points only.

2. You are a travel agent.
   Task: Create a 3-day itinerary for a family of four visiting Paris for the first time.
   Context: The family is interested in art, history, and food. They have a moderate budget.
   Output format: A day-by-day plan in a table format with columns for 'Day', 'Morning Activity', 'Afternoon Activity', and 'Evening Activity'.

3. You are a software developer.
   Task**:** Write a Python function that takes a list of numbers and returns the second-largest number.
   Context**:** The function should handle lists with duplicate numbers and lists with fewer than two elements.
   Output format: Only the Python code for the function, with a brief explanation of the logic in comments.

4. You are a social media manager.
   Task: Write three tweets for a new product launch.
   Context: The product is a new brand of eco-friendly coffee cups. The target audience is environmentally conscious millennials.
   Output format: A numbered list of the three tweets, each under 280 characters and including the hashtag #EcoFriendly.

5. You are a recruiter.
   Task: Draft an interview invitation email.
   Context: The email is for a candidate who has applied for a 'Marketing Manager' position. The interview will be a 30-minute video call.

Output format: A professional email template with placeholders for the candidate's name, date, and time, like [Candidate Name].

6. You are a data analyst.
   Task: Analyse the provided customer feedback data.
   Context: The data is in a CSV format with columns 'Feedback' and 'Rating'.
   Output format: A JSON object with two keys: 'positive_themes' and 'negative_themes', each containing a list of the top 3 recurring themes.

📌 3. Use of Examples (Few-shot Learning)

- Provide **examples of input-output pairs** to guide behaviour.
- Effective in cases like data formatting, classification, or transformation.

📌 *Examples:*

1. Task: Extract the company name from a news headline.

Input: "Apple announces new iPhone at their annual event."
Output: "Apple"
Input: "Shares of Microsoft surged after a positive earnings report."
Output: "Microsoft"
Input: "The new electric car from Tesla is getting great reviews."
Output:

2. Task: Simplify complex sentences.

Input: "The confluence of technological advancements and evolving consumer preferences has culminated in a paradigm shift within the retail sector."
Output: "New technology and changing customer tastes have transformed retail."
Input: "Notwithstanding the myriad challenges, the team endeavoured to persevere and ultimately achieved their objective."
Output: "Despite many challenges, the team kept trying and succeeded."
Input: "The individual who is the proprietor of the canine is accountable for its actions."
Output:

3. Task: Categorize customer support tickets.

Input: "I can't log in to my account."
Output: "Technical Issue"
Input: "How much does the premium plan cost?"
Output: "Billing Inquiry"
Input: "My order hasn't arrived yet."

Output:

4. Task: Convert natural language to a SQL query.

Input: "Show me all the users from Canada."
Output: SELECT * FROM users WHERE country = 'Canada';
Input: "Find the total number of orders placed last month."
Output: SELECT COUNT(*) FROM orders WHERE order_date >= DATE('now', '-1 month');
Input: "List all customers who have spent more than $100."
Output:

5. Task: Generate a product description in a specific style.

Input: "Product: Leather Wallet. Features: Hand-stitched, full-grain leather, 6 card slots."
Output: "Experience timeless craftsmanship with our hand-stitched leather wallet. Made from the finest full-grain leather, it features six card slots for all your essentials."
Input: "Product: Wireless Headphones. Features: Noise-cancelling, 20-hour battery, Bluetooth 5.0."
Output: "Immerse yourself in sound with our new wireless headphones. Enjoy crystal-clear audio with advanced noise-cancellation and a 20-hour battery life, all connected seamlessly via Bluetooth 5.0."
Input: "Product: Yoga Mat. Features: Eco-friendly cork, non-slip, 5mm thick."
Output:

📌 4. Iterative Refinement

- AI output improves with **prompt revision** and **iteration**.
- Use follow-up prompts to clarify, refine, or guide output.

📌 *Examples:*

1. Initial Prompt: "Explain quantum computing."

Follow-up 1: "That's a bit too technical. Can you explain it using an analogy of a coin?"
Follow-up 2: "Okay, I understand the concept of a qubit. Now, how does that make it faster than a regular computer?"
Follow-up 3: "What are some real-world problems that quantum computing could solve?"

2. Initial Prompt: "Write a story about a detective."

Follow-up 1: "Make the detective a grizzled veteran in 1940s Los Angeles."
Follow-up 2: "Now, give him a mysterious case involving a missing actress."
Follow-up 3: "Add a femme fatale character who might be misleading the detective."

3. Initial Prompt: "Create a logo for my coffee shop."

Follow-up 1: "The coffee shop is called 'The Daily Grind'. Can you incorporate a coffee bean into the logo?"
Follow-up 2: "I like the concept, but can you make the style more minimalist and modern?"
Follow-up 3: "Use a colour palette of dark brown and beige."

4. Initial Prompt: "Generate a Python script to scrape a website."

Follow-up 1: "The script is giving me an error. Here's the error message: [error message]. Can you help me debug it?"
Follow-up 2: "Now it's working, but it's only scraping the first page. How can I modify it to handle pagination and scrape all the pages?"
Follow-up 3: "Can you add a feature to save the scraped data into a CSV file?"

5. Initial Prompt: "Draft a professional email to my boss."

Follow-up 1: "The purpose of the email is to ask for a raise."
Follow-up 2: "Can you make the tone more confident and assertive, while still being respectful?"
Follow-up 3: "Please include a sentence mentioning my recent successful project as justification."

📌 5. Prompt Chaining or Cascading

- Break complex tasks into **multiple simpler steps** or chained prompts.
- Helps reduce hallucinations and increase reliability.

📌 *Examples:*

1. Task: Plan a home workout routine.

Step 1: "List 10 bodyweight exercises that require no equipment."
Step 2: "Organize these exercises into a 3-day workout split, with each day targeting different muscle groups (e.g., upper body, lower body, full body)."
Step 3: "For the 'upper body' day, create a table with the exercises, number of sets, and reps for a beginner."

2. Task: Analyze customer reviews for a product.

Step 1: "Here are 50 customer reviews for our new smartphone. Extract the top 5 most frequently mentioned positive aspects and top 5 negative aspects."

Step 2: "Summarize the extracted positive and negative points into two separate paragraphs."
Step 3: "Based on this summary, write a list of 3 actionable recommendations for the product development team."

3. Task: Create a social media campaign about cybersecurity.

Step 1: "Identify the top 5 most common cybersecurity threats for non-technical users."
Step 2: "For each threat, write a simple, one-sentence tip on how to avoid it."
Step 3: "Now, turn each tip into a short, engaging post for Instagram, and suggest a relevant image for each."

4. Task: Write a detailed blog post about the history of ancient Rome.

Step 1: "Generate a timeline of major events in the history of ancient Rome, from its founding to the fall of the Western Roman Empire."
Step 2: "Expand the first three events on the timeline into a detailed paragraph for each."
Step 3: "Write an introduction and a conclusion for a blog post that includes these paragraphs."

5. Task: Develop a new recipe.

Step 1: "List 10 common ingredients found in a Mediterranean diet."
Step 2: "Create a recipe for a main course using at least 5 of those ingredients."
Step 3: "Write a short, enticing description for this recipe to be featured on a food blog."

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6. Model Role Assignment

- Assign roles to the model for better contextual alignment.

Examples:

1. "You are a financial advisor. Explain the difference between a Roth IRA and a Traditional IRA in simple terms, and describe the type of person who might benefit from each."

2. "Act as a seasoned copywriter. Rewrite this product description to be more persuasive and benefit-oriented: 'This blender has a 1200-watt motor and stainless-steel blades.'"

3. "You are a career coach. I am a recent college graduate with a degree in English. What are three potential career paths I could pursue, and what are the first steps I

should take for each?"

4. "Assume the role of a historian specializing in the American Civil War. Explain the primary causes of the war in a way that is balanced and easy to understand."
5. "Act as a personal trainer. I want to start running to improve my fitness. Create a 4-week running plan for an absolute beginner."
6. "Act as a medical advisor and answer in a professional tone."

📌 7. Output Control and Constraints

- Control verbosity, tone, style, or output language explicitly.

📌 *Examples:*

1. "Respond in formal academic tone using less than 150 words."
2. "Summarize the plot of the movie 'Inception' in exactly three sentences."
3. "Translate the phrase 'Hello, how are you?' into Spanish, but only provide the informal 'tú' form."
4. "Generate a list of 5 startup ideas in the renewable energy sector. Do not include any ideas related to solar panels."
5. "Write a poem about the ocean. The poem must be a haiku, following the 5-7-5 syllable structure."
6. "Describe the benefits of meditation, but respond in a sceptical and critical tone, pointing out the potential downsides or lack of scientific evidence."

📌 8. Ethical Considerations and Bias Mitigation

- Avoid prompts that reinforce bias.
- Frame prompts in a **neutral, inclusive** way.
- Be aware of **cultural and social sensitivity**.

📌 *Examples:*

1. Instead of: "Generate a list of typical jobs for women." Use: "Generate a list of common professions across various industries, ensuring the list is diverse and not gender-specific."

2. Instead of: "Write a story about a programmer who is socially awkward." Use: "Write a story about a skilled programmer who is passionate about their work and collaborates effectively with their team."

3. Instead of: "Create a dialogue between a doctor (male) and a nurse (female)." Use: "Create a dialogue between a doctor and a nurse discussing a patient's care. Assign the roles randomly or use gender-neutral names."

4. Instead of: "Describe the characteristics of people from [specific country]." Use: "Describe the cultural heritage, traditions, and famous landmarks of [specific country], avoiding generalizations about its people."

5. Instead of: "Generate an image of a 'CEO'." Use: "Generate a diverse set of images of CEOs, showing people of different genders, ethnicities, and ages in leadership roles."

📌 9. Context Window Awareness

- Stay within model's **token limit** (e.g., ~8k or ~32k tokens).
- Avoid excessively long prompts unless necessary.
- Trim irrelevant details to maximize signal-to-noise ratio.

📌 *Examples:*

1. Instead of pasting a 100-page report and asking "Summarize this": Use: "I am providing the executive summary and conclusion sections of a 100-page report. Based on this, please generate a 5-bullet point summary of the report's key findings and recommendations."

2. When discussing a long article in a chat: Use: "Regarding the section on 'Market Trends' in the article we were discussing, can you elaborate on the point about AI's impact on the job market?" (This re-establishes context without re-sending the whole article).

3. Instead of a long, rambling prompt: Use: "Task: Generate a marketing plan. Product: New vegan protein bar. Target Audience: Fitness enthusiasts, age 25-40. Key Channels: Instagram, Fitness Blogs. Goal: 10,000 units sold in Q1. Please provide a 3-month plan." (This is concise and structured).

4. When dealing with large codebases: Instead of: "Here is my entire application's code. Find the bug." Use: "I'm getting a 'NullReferenceException' in my C# application. The error occurs in the CalculateTotal function within the OrderProcessor.cs file. Here is the code for that specific function. Can you help me identify the potential cause?"

5. For summarizing long transcripts: Instead of: "Summarize this 2-hour meeting transcript." Use: "I have a 2-hour meeting transcript. I will provide it in three parts. Please summarize each part as I send it, and then create a final, consolidated summary of all the key decisions and action items at the end."

📌 10. Task Type Awareness

Adjust prompt design depending on task:

- Text generation (e.g., blog, story)
- Q&A or factual retrieval
- Code generation
- Translation or summarization
- Classification or extraction

📌 *Examples:*

Text Generation: "Write a short, suspenseful story that starts with the sentence: 'The old house stood on a hill, and it had been empty for as long as anyone could remember.' The story should build tension and end on a cliffhanger."

Q&A / Factual Retrieval: "What was the date of the first moon landing, and who were the astronauts on the Apollo 11 mission?"

Code Generation: "Write a JavaScript function that takes an email address as input and returns true if it is a valid email format and false otherwise. Include comments explaining the regex used."

Translation / Summarization: "Translate the following paragraph into German, maintaining a formal and professional tone. Then, provide a one-sentence summary of the paragraph in English."

Classification / Extraction: "From the following customer email, classify the customer's intent (e.g., 'Complaint', 'Question', 'Praise') and extract the order number if it is mentioned. Email: 'Hello, I'm writing because my recent order, #A-12345, arrived with a broken item. I'm very disappointed. What can be done about this?'"

Practice Set- MCQs with Answers & Explanations

Category 1: Clarity and Specificity

Q#1. Which of the following prompts is the most clear and specific?

A) "Tell me about electric cars."

B) "Write something about the new Tesla model."

C) "Explain the benefits of electric cars for the environment."

D) "Explain the key differences in battery technology between the 2025 Tesla Model S and the 2025 Lucid Air, in under 200 words, for a non-technical audience."

Answer & Explanation:

Correct (D): This prompt is highly specific. It defines the topic (battery technology), the exact subjects for comparison (Tesla Model S vs. Lucid Air), the desired length (under 200 words), and the target audience (non-technical), leaving no room for ambiguity.

Incorrect (A): "Tell me about" is extremely vague and could result in anything from a short sentence to a multi-page essay on history, technology, or market trends.

Incorrect (B): "Write something" is not a clear instruction. The prompt also doesn't specify which new Tesla model or what aspect to write about (review, specs, price).

Incorrect (C): While more specific than A and B, it's still broad. It doesn't specify the format, length, or depth of the explanation required.

Q#2. A user wants a simple vegan cookie recipe. Which prompt best follows the principle of Clarity and Specificity?

A) "Give me a cookie recipe."

B) "I need a vegan recipe."

C) "Create a simple recipe for vegan chocolate chip cookies using common ingredients, with a prep time under 15 minutes and step-by-step instructions."

D) "What are some popular vegan desserts?"

Answer & Explanation:

Correct (C): This prompt specifies the exact dish (vegan chocolate chip cookies), constraints (simple, common ingredients, under 15 minutes), and the desired output format (step-by-step instructions).

Incorrect (A): This is too general. It doesn't specify the type of cookie, dietary restrictions, or complexity.

Incorrect (B): This is better but still vague. It could be a recipe for a cake, a pie, or a complex pastry, not necessarily cookies.

Incorrect (D): This is a request for ideas, not a specific recipe, which is a different goal.

Q#3. "Avoid vague or open-ended questions unless brainstorming is your goal." Which of the following prompts violates this advice for a non-brainstorming task? (Select all that apply)

A) "Generate 5 catchy, SEO-friendly blog post titles about the benefits of remote work for small businesses."

B) "What are your thoughts on the future of AI?"

C) "Explain the four-stroke cycle of a gasoline engine using an analogy for a high school student."

D) "Tell me some stuff about marketing."

Answer & Explanation:

Correct (B, D): Both prompts are classic examples of vague, open-ended questions that are not well-suited for getting a specific, factual answer. "What are your thoughts" and "Tell me some stuff" are invitations for broad, unfocused responses.

Incorrect (A): This is a highly specific brainstorming task. It clearly defines the number of outputs (5), the desired qualities (catchy, SEO-friendly), the topic (remote work benefits), and the audience (small businesses).

Incorrect (C): This is a very specific request for an explanation, including the exact concept, the method of explanation (analogy), and the target audience (high school student).

Q#4. A user wants to create a marketing email. Why is the prompt "Write a marketing email to existing customers about our new winter jackets, in a persuasive tone, under 200 words, with a 'Shop Now' call-to-action" better than "Write a marketing email"?

A) It's shorter and easier for the AI to understand.

B) It specifies the audience, product, tone, length, and a call-to-action.

C) It allows the AI more creative freedom.

D) It guarantees the email will be successful.

Answer & Explanation:

Correct (B): The effectiveness comes from providing precise constraints and context. It tells the AI exactly what is needed, reducing ambiguity and improving the likelihood of a relevant output.

Incorrect (A): While it might be easier to understand due to clarity, it's not necessarily shorter. The benefit is in the specificity, not brevity.

Incorrect (C): On the contrary, it limits creative freedom by providing clear boundaries, which is often desirable for specific tasks.

Incorrect (D): No prompt can guarantee success; it only increases the probability of a relevant and useful output.

Q#5. Which of the following elements contribute to 'Clarity and Specificity' in a prompt? (Select all that apply)

A) Using unambiguous language.

B) Specifying the desired output format (e.g., JSON, bullet points).

C) Avoiding any constraints on output length.

D) Clearly defining the target audience.

Answer & Explanation:

Correct (A, B, D): Unambiguous language ensures the AI understands the request. Specifying the output format guides the AI on how to present the information. Defining the target audience helps the AI tailor the tone and complexity of the response.

Incorrect (C): Avoiding constraints on output length goes against the principle of specificity, as it leaves a key aspect of the output undefined.

Category 2: Prompt Structure and Format

Q#6. A user wants the AI to act as a financial analyst and summarize an earnings report in 5 bullet points. Which prompt best demonstrates effective 'Prompt Structure and Format'?

A) "Summarize this earnings report." (followed by the report)

B) "You are a financial analyst. Task: Summarize this earnings report in 5 bullet points. Output: Bullet points only." (followed by the report)

C) "Financial report summary, 5 points." (followed by the report)

D) "Act like an analyst and tell me about this report." (followed by the report)

Answer & Explanation:

Correct (B): This prompt clearly defines the 'Instruction' (summarize), 'Context' (financial analyst role), and 'Output format' (5 bullet points, bullet points only), which are key elements of good prompt structure.

Incorrect (A): This prompt lacks structure and specificity regarding the role, length, and format.

Incorrect (C): This is too concise and lacks the clear instruction and context elements.

Incorrect (D): While it assigns a role, it's still vague about the task and output format.

Q#7. What are the basic elements of a well-structured prompt, according to the guidelines?

(Select all that apply)

A) Instruction

B) Context

C) Examples (Few-shot)

D) Output format

E) Emotional appeal

Answer & Explanation:

Correct (A, B, C, D): These are the four fundamental elements described: Instruction (what to do), Context (background info), Examples (demonstrations), and Output format (how to present).

Incorrect (E): Emotional appeal is not a standard structural element of a prompt; it might be part of the desired tone, but not the structure itself.

Q#8. A prompt includes the line: "You are a software developer. Task: Write a Python function..." This line primarily serves which purpose in prompt structure?

A) Output format

B) Example (Few-shot)

C) Context (Role Assignment)

D) Instruction

Answer & Explanation:

Correct (C): "You are a software developer" assigns a role, providing context for the AI's persona and knowledge base. The instruction is what the model should do, which comes after the role.

Incorrect (A): Output format specifies how the answer should be presented (e.g., JSON, bullet points).

Incorrect (B): An example would be an input-output pair demonstrating desired behavior.

Incorrect (D): The instruction is the specific action the model should take, e.g., "Write a Python function."

Q#9. You are drafting a prompt for a social media manager to write tweets. Which of the following elements are crucial for a well-structured prompt in this scenario? (Select all that apply)

A) Assigning the role of "social media manager."

B) Specifying the number of tweets to write.

C) Providing context about the product and target audience.

D) Including a desired hashtag for the tweets.

Answer & Explanation:

Correct (A, B, C, D): All these elements contribute to a well-structured prompt. Assigning the role (A) provides context. Specifying the number of tweets (B) is part of the instruction. Providing context about the product and audience (C) helps tailor the content. Including a desired hashtag (D) is a specific output format constraint.

Q#10. Which of the following is an example of defining the 'Output format' in a prompt?

A) "Summarize this article."

B) "Output: Bullet points only."

C) "You are a summarization expert."

D) "Here is the article to summarize."

Answer & Explanation:

Correct (B): "Output: Bullet points only" explicitly tells the model how the final response should be structured, which is the definition of output format.

Incorrect (A): This is the instruction.

Incorrect (C): This is role assignment/context.

Incorrect (D): This is the input data/context.

Category 3: Use of Examples (Few-shot Learning)

Q#11. **A user wants the AI to extract company names from news headlines. Which of the following best demonstrates the 'Use of Examples (Few-shot Learning)'?**

A) "Extract company names from these headlines."

B) "Input: 'Apple announces new iPhone.' Output: 'Apple'. Input: 'Microsoft shares surged.' Output: 'Microsoft'. Input: 'Tesla's new car.' Output: 'Tesla'."

C) "Tell me the companies mentioned in the news."

D) "What are the biggest tech companies?"

Answer & Explanation:

Correct (B): This option provides clear input-output pairs, which is the essence of few-shot learning. It shows the model exactly what kind of output is expected for a given input.

Incorrect (A): This is a direct instruction but provides no examples for the model to learn from.

Incorrect (C): This is a vague instruction without examples.

Incorrect (D): This is a factual question, not a task requiring pattern recognition through examples.

Q#12. **When is 'Few-shot Learning' particularly effective?** (Select all that apply)

A) When the task involves data formatting.

B) When the task involves classification.

C) When the task involves transformation.

D) When the task is a simple Q&A.

Answer & Explanation:

Correct (A, B, C): Few-shot learning is highly effective for tasks where the model needs to understand a specific pattern or rule for formatting, classifying, or transforming data, as the examples provide concrete demonstrations.

Incorrect (D): For simple Q&A, the model typically doesn't need examples; its pre-trained knowledge is usually sufficient.

Q#13. **You provide the following example to an AI: "Input: 'He is very happy' Output: 'Positive'". What is the primary purpose of this example?**

A) To provide context about the user's mood.

B) To demonstrate the desired sentiment classification output.

C) To show the AI how to write a happy sentence.

D) To limit the AI's response length.

Answer & Explanation:

Correct (B): The example clearly illustrates how the AI should classify the sentiment of the input text, mapping a specific input to a specific output category.

Incorrect (A): The example is about the AI's task, not the user's mood.

Incorrect (C): The AI is classifying, not generating, a happy sentence.

Incorrect (D): The example doesn't provide any information about response length.

Q#14. **A user wants to simplify complex sentences. They provide the example: "Input: 'The confluence of technological advancements...'; Output: 'New technology and changing customer tastes...'" What does this example teach the AI?**

A) How to identify technological advancements.

B) The desired style and level of simplification.

C) The meaning of confluence.

D) How to generate long sentences.

Answer & Explanation:

Correct (B): The example clearly shows the AI the desired transformation from a complex, verbose sentence to a simpler, more concise one, demonstrating the target style and level of simplification.

Incorrect (A): While the example contains a phrase about technology, the primary lesson is about simplification, not identifying specific concepts.

Incorrect (C): The example demonstrates simplification, not a definition of a specific word.

Incorrect (D): The example shows how to shorten, not lengthen, sentences.

Q#15. You are training an AI to convert natural language requests into SQL queries. You provide several input-output pairs. What is the main benefit of this approach?

A) It helps the AI understand the structure of a database.

B) It allows the AI to learn the mapping between natural language patterns and SQL syntax.

C) It teaches the AI how to optimize SQL queries.

D) It provides the AI with access to the database itself.

Answer & Explanation:

Correct (B): Few-shot examples in this context directly teach the AI the specific translation rules and patterns from human language to the precise syntax of SQL queries.

Incorrect (A): While the queries might implicitly reference database structure, the examples primarily focus on the language translation, not database design.

Incorrect (C): Query optimization is a separate, more advanced task not directly taught by simple input-output translation examples.

Incorrect (D): Providing examples does not grant the AI access to a live database.

Category 4: Iterative Refinement

Q#16. A user initially prompts, "Write a story about a detective." They then follow up with, "Make the detective a grizzled veteran in 1940s Los Angeles." This process demonstrates which prompt writing principle?

A) Prompt Chaining

B) Iterative Refinement

C) Output Control

D) Model Role Assignment

Answer & Explanation:

Correct (B): Iterative refinement involves revising and adding details to a prompt based on previous outputs or to guide the AI towards a more specific desired outcome. The user is refining the initial broad request.

Incorrect (A): Prompt chaining involves breaking a complex task into sequential, distinct steps, not necessarily refining the same output.

Incorrect (C): Output control focuses on explicit constraints like length or tone, not evolving the content itself.

Incorrect (D): While a role might be assigned, the core action here is refining the story's details, not just setting a role.

Q#17. Why is 'Iterative Refinement' an effective strategy for prompt writing? (Select all that apply)

A) It allows for clarification and guidance of the AI's output.

B) It helps to reduce hallucinations by narrowing down the scope.

C) It is the only way to get a perfect output on the first try.

D) It enables the user to add more specific details over time.

Answer & Explanation:

Correct (A, B, D): Iterative refinement allows users to clarify their needs, guide the AI's response, and add more specific details, which can also help in reducing irrelevant or hallucinated content by making the request more precise.

Incorrect (C): It's highly unlikely to get a perfect output on the first try, and iterative refinement is a process to improve output, not guarantee perfection immediately.

Q#18. A user asks for a logo, then follows up with requests like "incorporate a coffee bean" and "make the style more minimalist." This scenario exemplifies which aspect of Iterative Refinement?

A) Changing the entire task.

B) Adding specific design elements and stylistic preferences.

C) Asking for a completely new logo.

D) Debugging a technical error.

Answer & Explanation:

Correct (B): The user is refining the initial broad request for a logo by adding specific details about its content (coffee bean) and aesthetic (minimalist style).

Incorrect (A): The core task (creating a logo) remains the same; only the details are being refined.

Incorrect (C): The user is refining the existing concept, not starting from scratch.

Incorrect (D): This is a creative task, not a technical debugging scenario.

Q#19. Which of the following is a good reason to use iterative refinement when generating a Python script?

A) To get the script to run faster.

B) To debug errors and add features incrementally.

C) To make the script compatible with more programming languages.

D) To automatically deploy the script to a server.

Answer & Explanation:

Correct (B): Iterative refinement is excellent for debugging (e.g., providing error messages and asking for fixes) and for adding functionality step-by-step, making the development process more manageable.

Incorrect (A): While a refined script might be more efficient, the primary goal of iterative refinement is correctness and functionality, not necessarily speed optimization.

Incorrect (C): Iterative refinement focuses on improving the current script, not making it cross-language compatible.

Incorrect (D): Deployment is a separate step, not part of the script generation and refinement process.

Q#20. You are drafting an email and use iterative refinement. Which of these follow-up prompts would be appropriate? (Select all that apply)

A) "Make the tone more confident and assertive."

B) "Please include a sentence mentioning my recent successful project."

C) "Change the recipient to someone else entirely."

D) "Can you make this email shorter?"

Answer & Explanation:

Correct (A, B, D): These are all examples of refining an existing email draft by adjusting its tone, adding specific content, or controlling its length.

Incorrect (C): Changing the recipient entirely would likely require a significant rewrite and might be considered a new task rather than a refinement of the existing email's content.

Category 5: Prompt Chaining or Cascading

Q#21. Which of the following prompt sequences demonstrates Prompt Chaining or Cascading?

A) "First describe the problem, then suggest solutions."

B) "Summarize this article."

C) "Write a title, then write the first paragraph."

D) "What is the capital of France?"

Answer & Explanation:

Correct (A, C): These examples illustrate a multi-step process where each step builds upon the previous one. In (A), suggesting solutions depends on the problem description. In (C), the paragraph follows from the title.

Incorrect (B, D): These prompts involve single-step tasks that do not inherently require a sequence of dependent operations.

Q#22. What is the primary benefit of using Prompt Chaining for complex tasks?

A) It makes the AI respond faster.

B) It reduces hallucinations and increases reliability.

C) It allows the AI to learn new facts.

D) It makes the prompt shorter.

Answer & Explanation:

Correct (B): By breaking down complex tasks into simpler, manageable steps, prompt chaining helps the AI focus on one sub-task at a time, reducing the likelihood of errors or hallucinations, and improving the overall reliability of the output.

Incorrect (A): While some steps might be faster, the overall process might take longer due to multiple interactions.

Incorrect (C): Prompt chaining is about task execution, not about the AI learning new factual knowledge.

Incorrect (D): The total length of chained prompts is often longer than a single complex prompt.

Q#23. A user wants to create a social media campaign. They first ask the AI to identify top cybersecurity threats, then to write tips for each, and finally to turn those tips into Instagram posts. This is an example of:

A) Iterative Refinement

B) Single-shot Prompting

C) Prompt Chaining

D) Output Control

Answer & Explanation:

Correct (C): This is a clear example of prompt chaining, where a complex task (creating a social media campaign) is broken down into sequential, dependent sub-tasks.

Incorrect (A): Iterative refinement would involve refining the same output multiple times.

Incorrect (B): Single-shot prompting involves a single, self-contained request.

Incorrect (D): Output control focuses on constraints within a single output.

Q#24. Which of the following scenarios would most benefit from Prompt Chaining?

A) Asking for the definition of a single word.

B) Generating a short, creative poem.

C) Analyzing a large dataset, summarizing findings, and then generating a presentation based on those summaries.

D) Translating a single sentence from English to French.

Answer & Explanation:

Correct (C): This scenario involves multiple distinct, sequential steps (analysis, summarization, presentation generation) that build upon each other, making it ideal for prompt chaining to manage complexity and ensure accuracy.

Incorrect (A, B, D): These are relatively simple, single-step tasks that do not require the complexity management offered by prompt chaining.

Q#25. What is the relationship between the steps in a Prompt Chaining sequence?

A) Each step is completely independent of the others.

B) Each subsequent step builds upon the output or context of the previous step.

C) The steps can be executed in any random order.

D) Only the final step is important; intermediate steps are irrelevant.

Answer & Explanation:

Correct (B): The core principle of prompt chaining is that the output or context from one step becomes the input or context for the next, creating a logical flow.

Incorrect (A): If steps were independent, it wouldn't be chaining; it would just be multiple separate prompts.

Incorrect (C): The order is crucial for the logical progression of the task.

Incorrect (D): Intermediate steps are vital for breaking down complexity and ensuring the quality of the final output.

Category 6: Model Role Assignment

Q#26. Which of the following prompts effectively uses 'Model Role Assignment'?

A) "Tell me about medical advice."

B) "Act as a medical advisor and answer in a professional tone."

C) "Give me some advice."

D) "What is the role of a doctor?"

Answer & Explanation:

Correct (B): This prompt explicitly assigns the AI the persona of a medical advisor, which guides its response style and content.

Incorrect (A, C): These are vague requests for information or advice without specifying a persona.

Incorrect (D): This is a factual question about a role, not an assignment of a role to the AI.

Q#27. What is the primary benefit of assigning a role to the model?

A) It makes the model respond faster.

B) It helps align the model's output with a specific context, tone, and knowledge base.

C) It increases the model's token limit.

D) It allows the model to access external databases.

Answer & Explanation:

Correct (B): Role assignment helps the AI adopt a specific persona, which influences its tone, vocabulary, and the type of information it provides, making the output more contextually relevant.

Incorrect (A): Role assignment does not directly impact response speed.

Incorrect (C): Role assignment has no effect on the model's token limit.

Incorrect (D): Role assignment does not grant the model access to external databases.

Q#28. A user wants the AI to explain the causes of the American Civil War from a balanced historical perspective. Which role assignment would be most appropriate?

A) "Act as a passionate storyteller."

B) "Assume the role of a historian specializing in the American Civil War."

C) "You are a political commentator."

D) "Be a high school student."

Answer & Explanation:

Correct (B): Assigning the role of a historian specializing in the American Civil War ensures the AI provides an accurate, detailed, and balanced account from an expert perspective.

Incorrect (A): A storyteller might prioritize narrative over factual accuracy.

Incorrect (C): A political commentator might offer opinions rather than historical facts.

Incorrect (D): A high school student would not have the depth of knowledge required.

Q#29. Which of the following prompts uses role assignment to guide the AI's output tone and content? (Select all that apply)

A) "You are a seasoned copywriter. Rewrite this product description to be more persuasive."

B) "Act as a personal trainer. Create a 4-week running plan for a beginner."

C) "Explain the concept of photosynthesis."

D) "Assume the role of a financial advisor. Explain the difference between a Roth IRA and a Traditional IRA."

Answer & Explanation:

Correct (A, B, D): In these prompts, the assigned role (copywriter, personal trainer, financial advisor) directly influences the tone (persuasive), the type of content (running plan), and the level of explanation (financial advice).

Incorrect (C): This is a factual request without any role assignment.

Q#30. If you want the AI to provide a professional and objective explanation of a complex topic, which type of role assignment would be most effective?

A) A casual friend

B) A comedian

C) An academic expert

D) A marketing specialist

Answer & Explanation:

Correct (C): An academic expert persona would ensure the explanation is professional, objective, and grounded in deep knowledge.

Incorrect (A): A casual friend would likely use informal language.

Incorrect (B): A comedian would prioritize humor over objectivity.

Incorrect (D): A marketing specialist would focus on persuasion rather than objective explanation.

Category 7: Output Control and Constraints

Q#31. Which of the following prompts effectively uses 'Output Control and Constraints'?

A) "Tell me a story."

B) "Write a short story about a brave knight."

C) "Write a short story about a brave knight, in a whimsical tone, not exceeding 500 words."

D) "What is a knight?"

Answer & Explanation:

Correct (C): This prompt explicitly controls the output by specifying the length (not exceeding 500 words) and the tone (whimsical).

Incorrect (A, B): These prompts are too general and do not include specific output constraints.

Incorrect (D): This is a factual question, not a request for creative writing with output controls.

Q#32. What aspects of the AI's output can be controlled using 'Output Control and Constraints'? (Select all that apply)

A) Verbosity

B) Tone

C) Style

D) Output language

E) The AI's internal thought process

Answer & Explanation:

Correct (A, B, C, D): These are all common aspects of output that can be explicitly controlled through prompt instructions, guiding the AI to produce responses of a specific length, emotional quality, writing manner, or language.

Incorrect (E): Users cannot directly control the AI's internal thought process; they can only influence its output.

Q#33. A user wants a summary of a movie. Which prompt best demonstrates 'Output Control and Constraints'?

A) "Summarize the plot of the movie 'Inception'."

B) "Summarize the plot of the movie 'Inception' in exactly three sentences."

C) "Tell me if 'Inception' is a good movie."

D) "Write a review of 'Inception'."

Answer & Explanation:

Correct (B): This prompt uses a precise constraint on length ("exactly three sentences"), which is a form of output control.

Incorrect (A): This is a general request for a summary without specific constraints.

Incorrect (C): This asks for an opinion, not a summary.

Incorrect (D): This asks for a review, which is a different task from a summary.

Q#34. You want the AI to generate a list of startup ideas but want to exclude certain types. Which prompt effectively uses output constraints for this purpose?

A) "Generate a list of 5 startup ideas."

B) "Generate a list of 5 startup ideas in the renewable energy sector. Do not include any ideas related to solar panels."

C) "What are some good startup ideas?"

D) "Tell me about renewable energy."

Answer & Explanation:

Correct (B): This prompt sets a clear constraint by explicitly excluding a specific type of idea ("Do not include any ideas related to solar panels"), thereby controlling the content of the output.

Incorrect (A): This is a general request without exclusions.

Incorrect (C): This is a vague, open-ended question.

Incorrect (D): This is a request for information, not idea generation.

Q#35. A user asks the AI to write a poem. Which of the following constraints would be an example of 'Output Control'? (Select all that apply)

A) "The poem must be a haiku, following the 5-7-5 syllable structure."

B) "The poem should be about nature."

C) "The poem should rhyme."

D) "The poem should be written in English."

Answer & Explanation:

Correct (A, C, D): These are all specific constraints on the form (haiku, rhyming) and language of the output, directly controlling how the poem is generated.

Incorrect (B): "About nature" is a topic constraint, not a constraint on the output's form, style, or language.

Category 8: Ethical Considerations and Bias Mitigation

Q#36. Which of the following prompts best demonstrates an awareness of 'Ethical Considerations and Bias Mitigation'?

A) "Generate a list of typical jobs for women."

B) "Write a story about a programmer who is socially awkward."

C) "Generate a diverse set of images of CEOs, showing people of different genders, ethnicities, and ages in leadership roles."

D) "Describe the characteristics of people from [specific country]."

Answer & Explanation:

Correct (C): This prompt actively seeks to mitigate bias by explicitly requesting diversity in gender, ethnicity, and age for the generated images of CEOs, countering common stereotypes.

Incorrect (A): This prompt reinforces gender stereotypes about professions.

Incorrect (B): This prompt reinforces a common stereotype about programmers.

Incorrect (D): This prompt encourages generalizations and potential stereotypes about people from a specific country.

Q#37. **Why is it important to frame prompts in a neutral and inclusive way?** (Select all that apply)

A) To avoid reinforcing harmful stereotypes.

B) To ensure the AI's output is relevant to a wider audience.

C) To make the AI respond faster.

D) To comply with ethical AI guidelines.

Answer & Explanation:

Correct (A, B, D): Framing prompts neutrally helps prevent the perpetuation of stereotypes (A), makes the content more broadly applicable and acceptable (B), and aligns with responsible AI development practices (D).

Incorrect (C): Prompt framing for bias mitigation does not directly impact response speed.

Q#38. **A user wants a dialogue between a doctor and a nurse. Which prompt best mitigates potential gender bias?**

A) "Create a dialogue between a male doctor and a female nurse."

B) "Create a dialogue between a doctor and a nurse discussing a patient's care. Assign the roles randomly or use gender-neutral names."

C) "Write a dialogue where the doctor is the authority figure and the nurse is subservient."

D) "Describe a typical interaction between a doctor and a nurse."

Answer & Explanation:

Correct (B): This prompt actively addresses potential bias by suggesting random assignment or gender-neutral names, avoiding the reinforcement of traditional gender roles in healthcare professions.

Incorrect (A): This explicitly reinforces gender stereotypes.

Incorrect (C): This reinforces a hierarchical and potentially biased power dynamic.

Incorrect (D): This is vague and could lead to the AI defaulting to common, potentially biased, representations.

Q#39. Which of the following is an example of a prompt that could inadvertently reinforce bias?

A) "Write a story about a successful entrepreneur."

B) "Describe a typical family from the 1950s."

C) "Generate images of scientists working in a lab."

D) "Create a diverse group of engineers collaborating on a project."

Answer & Explanation:

Correct (B): A prompt asking for a "typical" family from a specific era is likely to generate a response that reflects the dominant, often stereotypical, family structure of that time, potentially excluding other family types.

Incorrect (A, C): While these could lead to biased outputs if not specified further, they are not inherently biased prompts.

Incorrect (D): This prompt actively works to mitigate bias by requesting diversity.

Q#40. What is the best way to handle a request that asks for potentially sensitive or stereotypical information?

A) Fulfill the request exactly as asked.

B) Refuse to answer the prompt.

C) Reframe the prompt to be more neutral and inclusive.

D) Ask the user for clarification on their intent.

Answer & Explanation:

Correct (C): The most responsible approach is to reframe the prompt to avoid generating harmful stereotypes while still addressing the user's underlying request in a more ethical way.

Incorrect (A): This would be irresponsible and could perpetuate bias.

Incorrect (B): While refusal is an option for harmful requests, reframing is often a more constructive approach.

Incorrect (D): While clarification can be helpful, it's often better to proactively guide the user towards a more ethical framing.

Category 9: Context Window Awareness

Q#41. **What does the term 'Context Window' refer to in the context of AI models?**

A) The physical screen size of the user's device.

B) The model's ability to understand different cultural contexts.

C) The maximum amount of text (prompt + response) the model can process at one time.

D) The time it takes for the model to generate a response.

Answer & Explanation:

Correct (C): The context window, or token limit, is a fundamental constraint of large language models, defining the total amount of information they can consider for a single request.

Incorrect (A): The user's screen size is irrelevant to the model's internal processing limits.

Incorrect (B): While understanding cultural context is a capability, it's not what the term 'context window' refers to.

Incorrect (D): Response time is a performance metric, not the context window.

Q#42. **A user wants to summarize a 100-page report. What is the best approach to handle this, keeping the context window in mind?**

A) Paste the entire 100-page report into the prompt and ask for a summary.

B) Provide key sections like the executive summary and conclusion, and ask for a summary based on those.

C) Ask the AI to find the report online and summarize it.

D) Ask the AI to summarize the report without providing any text.

Answer & Explanation:

Correct (B): This approach respects the context window by providing only the most relevant, high-signal information, allowing the AI to generate a summary without being overwhelmed by excessive text.

Incorrect (A): A 100-page report would almost certainly exceed the context window of most models, leading to an error or a summary based on only the initial part of the text.

Incorrect (C): The AI cannot independently browse the web to find and read documents.

Incorrect (D): The AI needs the content to be able to summarize it.

Q#43. Why is it important to trim irrelevant details from a prompt?

A) To make the prompt more challenging for the AI.

B) To maximize the signal-to-noise ratio and focus the AI on the most important information.

C) To make the prompt longer and more detailed.

D) To test the limits of the AI's context window.

Answer & Explanation:

Correct (B): Trimming irrelevant details ensures that the limited context window is filled with high-quality, relevant information, which helps the AI produce a more accurate and focused response.

Incorrect (A): The goal is to make the task clearer, not more challenging.

Incorrect (C): The goal is to be concise and relevant, not necessarily long.

Incorrect (D): While this might happen as a side effect, the primary goal is to improve output quality, not to test system limits.

Q#44. When discussing a long article in a chat, what is a good practice to maintain context without exceeding the token limit?

A) Re-paste the entire article with every new question.

B) Refer to specific sections or points from the article in follow-up questions.

C) Start a new chat for every question about the article.

D) Ask the AI to remember the article from a previous conversation.

Answer & Explanation:

Correct (B): Referring to specific sections helps re-establish context for the AI without consuming a large number of tokens by re-sending the entire document.

Incorrect (A): This is highly inefficient and will quickly exceed the context window.

Incorrect (C): This would lose the context of the article entirely.

Incorrect (D): While models have some memory within a conversation, it's not reliable for long documents over extended periods; explicitly providing context is better.

Q#45. You are debugging a large codebase with an AI. What is the most effective way to use the context window?

A) Provide the entire application's code and ask the AI to find the bug.

B) Describe the bug in general terms without providing any code.

C) Provide the specific function or code block where the error occurs, along with the error message.

D) Provide a link to the code repository.

Answer & Explanation:

Correct (C): This is the most efficient use of the context window. It provides the AI with the most relevant information (the problematic code and the error message) needed to diagnose the issue.

Incorrect (A): This would exceed the context window and be highly inefficient.

Incorrect (B): Without the code, the AI cannot effectively debug the issue.

Incorrect (D): The AI cannot access external websites or repositories.

Category 10: Task Type Awareness

Q#46. **Which of the following prompts is best suited for a 'Text Generation' task?**

A) "What is the capital of Mongolia?"

B) "Write a short, suspenseful story that starts with the sentence: 'The old house stood on a hill...'"

C) "Translate 'hello' into Japanese."

D) "Extract the names of all people mentioned in this article."

Answer & Explanation:

Correct (B): This prompt asks the AI to creatively generate a new piece of text (a story) based on a starting point, which is the core of text generation.

Incorrect (A): This is a factual retrieval (Q&A) task.

Incorrect (C): This is a translation task.

Incorrect (D): This is an extraction task.

Q#47. **A user wants to get the email address from a block of text. This is an example of which task type?**

A) Text Generation

B) Summarization

C) Classification

D) Extraction

Answer & Explanation:

Correct (D): Extraction involves identifying and pulling out specific pieces of information (like an email address) from a larger body of text.

Incorrect (A): Text generation creates new text.

Incorrect (B): Summarization condenses the text.

Incorrect (C): Classification assigns a label to the text.

Q#48. **You need to write a prompt for a 'Code Generation' task. Which of the following is the most effective prompt?**

A) "Write some code."

B) "Explain how a for loop works."

C) "Write a JavaScript function that takes an email address as input and returns true if it is a valid email format and false otherwise. Include comments explaining the regex used."

D) "What is the difference between Python and JavaScript?"

Answer & Explanation:

Correct (C): This prompt is highly specific about the desired code generation task, including the language (JavaScript), the function's purpose, its input and output, and even a request for comments, making it ideal for this task type.

Incorrect (A): This is extremely vague.

Incorrect (B, D): These are factual explanation tasks, not code generation tasks.

Q#49. **The prompt "From the following customer email, classify the customer's intent (e.g., 'Complaint', 'Question', 'Praise')" is an example of which task type?**

A) Translation

B) Q&A

C) Classification

D) Text Generation

Answer & Explanation:

Correct (C): Classification tasks involve assigning a predefined category or label (in this case, 'Complaint', 'Question', or 'Praise') to a piece of text.

Incorrect (A): Translation converts text from one language to another.

Incorrect (B): Q&A involves answering a specific question.

Incorrect (D): Text generation creates new text.

Q#50. Why is it important to be aware of the task type when designing a prompt?

A) Because different task types require different prompt structures and levels of specificity.

B) Because the AI can only perform one type of task.

C) Because it determines the cost of using the AI.

D) Because it changes the AI's personality.

Answer & Explanation:

Correct (A): Different tasks have different requirements. For example, a creative writing prompt will be very different from a code generation prompt or a classification prompt. Awareness of the task type allows you to tailor the prompt for the best results.

Incorrect (B): Modern AI models are capable of performing many different types of tasks.

Incorrect (C): While task complexity can influence cost, the primary reason for awareness is to improve output quality.

Incorrect (D): While role assignment can change the AI's persona, the task type itself does not.

Category 1-10: Mixed Scenario-Based Questions

Q#51. A startup founder wants to generate a mission statement. Which prompt is most likely to produce a high-quality, specific result?

A) "Write a mission statement for my company."

B) "Act as a brand strategist. Generate three mission statement options for a startup that sells sustainable, ethically-sourced coffee. The tone should be inspiring and community-focused. Output as a numbered list."

C) "What makes a good mission statement?"

D) "Example Input: 'We sell shoes.' Example Output: 'To bring inspiration and innovation to every athlete in the world.' Now, do that for my coffee company."

Answer & Explanation:

Correct (B): This prompt excels by combining multiple principles: Model Role Assignment ("Act as a brand strategist"), Clarity and Specificity (defines the product, values, tone), and Output Control (three options, numbered list). This comprehensive structure gives the AI the best guidance.

Incorrect (A): This is too vague and lacks any specific details about the company or desired output, violating the principle of Clarity and Specificity.

Incorrect (C): This is a factual question (Task Type Awareness) and will explain what a mission statement is, but it won't generate one for the user's company.

Incorrect (D): While this uses Few-shot Learning, the single example is very generic and may not capture the specific nuances (sustainability, ethical sourcing) the founder wants, making option B's specific context more effective.

Q#52. A user is trying to write a Python script to scrape a website but it keeps failing. They first ask the AI to write the script, then provide an error message for debugging, and finally ask to add a feature to save the data to a CSV. This entire interaction is a clear example of:

A) Ethical Considerations

B) Iterative Refinement

C) Context Window Awareness

D) Single-shot prompting

Answer & Explanation:

Correct (B): This scenario perfectly illustrates Iterative Refinement. The user starts with a general request and then refines it over multiple steps by providing feedback (the error message) and adding new requirements (saving to CSV). This step-by-step improvement is the core of the iterative process.

Incorrect (A): The task of writing a web scraper does not inherently involve ethical considerations unless the target website's terms of service are being violated, which is not the focus of the prompt writing technique shown.

Incorrect (C): While the user must stay within the context window, the process of refining the script step-by-step is the primary principle being demonstrated.

Incorrect (D): This is the opposite of single-shot prompting; it is a multi-step interaction.

Q#53. A teacher wants to create a history quiz about Ancient Rome. They use the following sequence of prompts:

"List the 10 most significant events in the history of the Roman Republic."

"For each of the first 5 events on that list, generate a multiple-choice question with one correct and three incorrect answers."

"Format all the questions and answers into a JSON array." This sequence is a prime example of which principle?

A) Model Role Assignment

B) Prompt Chaining / Cascading

C) Few-shot Learning

D) Bias Mitigation

Answer & Explanation:

Correct (B): This is a classic case of Prompt Chaining. The teacher breaks the complex task of creating a quiz into three distinct, sequential steps. The output of step 1 is the input for step 2, and the output of step 2 is the input for step 3. This structured, step-by-step approach is the essence of chaining.

Incorrect (A): No specific role (like "Act as a historian") was assigned to the model.

Incorrect (C): The teacher did not provide any examples of input-output pairs for the AI to follow.

Incorrect (D): The task of creating a history quiz is generally objective and does not require specific bias mitigation techniques in this context.

Q#54. A user provides the following prompt: "You are a master chef. Your task is to critique this recipe and suggest improvements. Respond in a constructive and encouraging tone. The recipe is for a lasagna." Why is this an effective prompt? (Select all that apply)

A) It uses Model Role Assignment.

B) It specifies the desired tone.

C) It clearly defines the task.

D) It provides a complete example.

Answer & Explanation:

Correct (A, B, C): This prompt is effective because it successfully combines three key principles. It assigns a role ("master chef") to provide expert context. It controls the output tone ("constructive and encouraging"). And it has a clear instruction ("critique this recipe and suggest improvements").

Incorrect (D): The prompt describes the task but does not provide a few-shot example of a critique.

Q#55. A user wants to generate an image of a doctor. To mitigate bias, which prompt is the most ethically sound?

A) "Generate an image of a doctor."

B) "Generate an image of a male doctor in a white coat."

C) "Generate a diverse group of doctors of various ethnicities and genders, shown collaborating in a modern hospital setting."

D) "Generate a realistic photo of a typical doctor."

Answer & Explanation:

Correct (C): This prompt directly addresses and actively works to mitigate bias by asking for diversity in ethnicity and gender, and shows them in a collaborative, professional setting. This is a core practice of Ethical Considerations and Bias Mitigation.

Incorrect (A): This is a neutral but vague prompt that might cause the model to default to common stereotypes.

Incorrect (B): This prompt reinforces a gender stereotype.

Incorrect (D): The word "typical" is problematic as it encourages the model to generate a stereotypical image, which is what ethical prompting aims to avoid.

Q#56. A user wants to translate a long legal document from English to Spanish. They know the document will exceed the model's context window. What is the best strategy?

A) Paste the whole document and hope the model figures it out.

B) Ask the model to find the document online.

C) Break the document into smaller sections (e.g., paragraphs or pages) and feed them to the model one by one using Prompt Chaining.

D) Ask the model to increase its context window.

Answer & Explanation:

Correct (C): This demonstrates strong Context Window Awareness and effective use of Prompt Chaining. By breaking the large task into smaller, manageable chunks, the user can process the entire document without exceeding the token limit in any single prompt.

Incorrect (A): This will fail. The model will either return an error or only process the beginning of the document.

Incorrect (B): The model cannot access external websites to find documents.

Incorrect (D): The user cannot change the model's fundamental architecture, such as its context window size.

Q#57. A prompt begins: "Input: 'I loved the movie!' -> Output: 'Positive'. Input: 'The service was terrible.' -> Output: 'Negative'." This is a clear example of what technique?

A) Output Control

B) Model Role Assignment

C) Few-shot Learning

D) Prompt Chaining

Answer & Explanation:

Correct (C): This is a textbook example of Few-shot Learning. The user is providing the model with explicit input-output examples to teach it the desired pattern for a sentiment classification task.

Incorrect (A): While the output is controlled in a way, the primary technique being used is providing examples, not just stating a rule.

Incorrect (B): No role is being assigned to the model.

Incorrect (D): This is a single prompt containing examples, not a chain of sequential prompts.

Q#58. Which prompt is best suited for a 'Classification' task type?

A) "Write a Python function to sort a list of numbers."

B) "Based on the following news article, is its primary topic 'Technology', 'Politics', or 'Sports'?"

C) "Summarize the main points of this article in three bullet points."

D) "Write a headline for this news article."

Answer & Explanation:

Correct (B): This prompt perfectly aligns with the Classification task type. It asks the model to analyze a piece of text and assign it to one of several predefined categories.

Incorrect (A): This is a Code Generation task.

Incorrect (C): This is a Summarization task.

Incorrect (D): This is a Text Generation task.

Q#59. **A user wants a list of healthy dinner ideas. Which prompt best uses 'Output Control and Constraints'?**

A) "What are some healthy dinner ideas?"

B) "Give me 5 healthy dinner ideas that are vegetarian, take less than 30 minutes to prepare, and list the primary ingredients for each."

C) "Act as a nutritionist and suggest some healthy meals."

D) "I need some recipes for dinner."

Answer & Explanation:

Correct (B): This prompt demonstrates excellent Output Control. It constrains the number of ideas (5), the content (vegetarian, under 30 mins), and the format (list the ingredients). This level of detail ensures the output is highly relevant and structured.

Incorrect (A): This is a vague, open-ended question with no constraints.

Incorrect (C): This uses Model Role Assignment but lacks specific output constraints.

Incorrect (D): This is extremely vague and doesn't even specify that the ideas should be healthy.

Q#60. **The instruction "You are a sarcastic assistant. Your goal is to answer factual questions correctly, but with a witty, sarcastic tone" primarily focuses on which two principles?** (Select two)

A) Model Role Assignment

B) Output Control (Tone)

C) Few-shot Learning

D) Prompt Chaining

Answer & Explanation:

Correct (A, B): This prompt clearly uses Model Role Assignment by defining the AI's persona ("sarcastic assistant"). It also uses Output Control by explicitly defining the required tone ("witty, sarcastic").

Incorrect (C): No input-output examples are provided.

Incorrect (D): This is a single instruction, not a chain of dependent prompts.

Q#61. **A user wants to summarize a very long academic paper. They decide to feed the paper to the AI section by section, asking for a summary of each section, and then finally asking for a summary of all the section summaries. This approach primarily addresses which two prompt writing principles?** (Select two)

A) Ethical Considerations

B) Context Window Awareness

C) Prompt Chaining / Cascading

D) Model Role Assignment

Answer & Explanation:

Correct (B, C): This strategy directly addresses Context Window Awareness by breaking down a large document into manageable chunks to avoid exceeding the token limit. It also exemplifies Prompt Chaining / Cascading because the output of summarizing individual sections (the section summaries) becomes the input for the final, overarching summary.

Incorrect (A): The task of summarizing an academic paper does not inherently involve ethical considerations in this context.

Incorrect (D): No specific role is assigned to the model in this process.

Q#62. **You are creating a prompt for an AI to generate a short story. Which of the following details would be most important to include for effective 'Clarity and Specificity'?**

A) The story should be interesting.

B) The story should be about a cat.

C) The story should be a mystery, set in a futuristic city, told from the perspective of a cynical detective, and be approximately 1500 words long.

D) The story should have a good plot.

Answer & Explanation:

Correct (C): This prompt provides a high degree of Clarity and Specificity by defining the genre (mystery), setting (futuristic city), protagonist's perspective (cynical detective), and length (1500 words). These details give the AI precise boundaries and creative direction.

Incorrect (A, D): "Interesting" and "good plot" are subjective and vague, providing no actionable guidance to the AI.

Incorrect (B): While specifying the subject (a cat) adds some clarity, it lacks the depth and detail of option C regarding genre, setting, and length.

Q#63. A user wants to train an AI to identify spam emails. They provide the AI with numerous examples of emails labelled as 'Spam' or 'Not Spam'. This is an application of:

A) Iterative Refinement

B) Few-shot Learning

C) Output Control

D) Task Type Awareness

Answer & Explanation:

Correct (B): Providing labelled examples (input-output pairs) for the AI to learn from is the definition of Few-shot Learning. This allows the AI to recognize patterns and classify new, unseen emails.

Incorrect (A): Iterative refinement involves refining a single output or task over multiple turns.

Incorrect (C): Output control dictates the format or constraints of the AI's response, not how it learns to classify.

Incorrect (D): While this is a classification task, the technique being used to teach the AI is few-shot learning.

Q#64. You are writing a prompt for a creative writing task. Which of the following elements would be most relevant to include under 'Output Control and Constraints'? (Select all that apply)

A) The desired word count.

B) The required literary genre (e.g., fantasy, sci-fi).

C) The specific point of view (e.g., first-person, third-person limited).

D) The emotional impact you want the story to have on the reader.

Answer & Explanation:

Correct (A, B, C, D): All these elements are effective forms of Output Control for creative writing. Word count (A) is a direct length constraint. Genre (B) and point of view (C) are stylistic constraints. Emotional impact (D) guides the tone and thematic elements of the narrative.

Q#65. A user asks the AI: "You are a seasoned journalist. Write a news report about the recent local election results. Focus on factual reporting and avoid any speculative language." This prompt effectively uses:

A) Few-shot Learning and Context Window Awareness

B) Model Role Assignment and Output Control (Tone)

C) Prompt Chaining and Ethical Considerations

D) Clarity and Specificity and Iterative Refinement

Answer & Explanation:

Correct (B): The prompt assigns the Model Role of a "seasoned journalist," guiding the AI's persona. It also uses Output Control by specifying the desired tone ("factual reporting" and "avoid any speculative language").

Incorrect (A): No examples are provided, and context window awareness isn't the primary focus here.

Incorrect (C): This is a single prompt, not a chain, and while ethical reporting is implied, it's not the primary principle being demonstrated over role and tone.

Incorrect (D): While clarity and specificity are present, iterative refinement is a process over multiple turns, not a single prompt.

Q#66. When dealing with a prompt that might lead to stereotypical outputs (e.g., asking for an image of a 'scientist'), what is the most proactive way to apply 'Ethical Considerations and Bias Mitigation'?

A) Ask the user if they want a diverse image.

B) Generate the image and then edit it if it's biased.

C) Explicitly request diversity in the initial prompt (e.g., "Generate an image of a scientist of diverse gender and ethnicity").

D) Refuse to generate the image.

Answer & Explanation:

Correct (C): The most proactive and effective way to mitigate bias is to build diversity into the initial prompt itself. This ensures the AI is guided towards inclusive outputs from the start, embodying Ethical Considerations and Bias Mitigation.

Incorrect (A): This puts the burden on the user and is reactive rather than proactive.

Incorrect (B): Editing after generation is less efficient and still means a biased image was initially produced.

Incorrect (D): Refusing to generate is an extreme measure and doesn't help the user achieve their goal in an ethical way.

Q#67. A user wants to analyze a large dataset of customer reviews (too large for a single prompt). They plan to:

Upload the data in chunks.

For each chunk, ask the AI to identify common positive and negative themes.

Finally, ask the AI to synthesize all identified themes into a comprehensive report. This strategy demonstrates which two principles? (Select two)

A) Task Type Awareness

B) Context Window Awareness

C) Prompt Chaining / Cascading

D) Iterative Refinement

Answer & Explanation:

Correct (B, C): This approach directly addresses Context Window Awareness by processing data in chunks. It also uses Prompt Chaining / Cascading as the output of identifying themes from chunks becomes the input for the final synthesis, breaking a complex analysis into sequential steps.

Incorrect (A): While it's a data analysis task, the primary principles demonstrated by the strategy are context window management and chaining.

Incorrect (D): Iterative refinement would involve refining the same output or request, not processing distinct chunks sequentially.

Q#68. Which of the following prompts is an example of a 'Code Generation' task type?

A) "Explain the concept of recursion in programming."

B) "Write a Python script to calculate the factorial of a number."

C) "Debug the following Java code snippet."

D) "What are the best practices for writing clean code?"

Answer & Explanation:

Correct (B): This prompt explicitly asks the AI to produce executable code based on a functional requirement, which is the definition of a Code Generation task.

Incorrect (A, D): These are requests for explanations or information, not code.

Incorrect (C): This is a debugging task, which involves modifying existing code, not generating new code from scratch.

Q#69. **A user wants to generate a short story. They first ask for a plot outline, then for character descriptions, and finally for the story itself based on the previous outputs. This is an example of:**

A) Iterative Refinement

B) Few-shot Learning

C) Prompt Chaining

D) Output Control

Answer & Explanation:

Correct (C): This is a classic example of Prompt Chaining. The complex task of writing a story is broken down into sequential, dependent steps (outline -> characters -> story), where each step's output informs the next.

Incorrect (A): Iterative refinement would involve refining the story itself multiple times.

Incorrect (B): No input-output examples are provided.

Incorrect (D): While output control might be used within each step, the overall strategy is chaining.

Q#70. **Which of the following prompts demonstrates good 'Clarity and Specificity' for a research task?**

A) "Research climate change."

B) "Find information about renewable energy."

C) "Investigate the economic impact of solar panel adoption in residential areas of California between 2010 and 2020, citing at least three credible sources, and summarize findings in a 500-word report."

D) "Tell me everything about the environment."

Answer & Explanation:

Correct (C): This prompt is highly specific. It defines the exact topic (economic impact of solar panels), location (California), timeframe (2010-2020), research requirements (three credible sources), and output format/length (500-word report). This leaves no ambiguity for the AI.

Incorrect (A, B, D): These are all very broad and vague research requests that would likely result in unfocused or overwhelming amounts of information.

Q#71. A user provides the AI with several examples of customer support tickets and their corresponding resolutions. This is primarily to enable the AI to perform which task type more effectively?

A) Text Generation

B) Summarization

C) Classification / Extraction

D) Translation

Answer & Explanation:

Correct (C): Providing examples of tickets and resolutions is ideal for training the AI to classify new tickets (e.g., by issue type) or extract key information (e.g., customer name, problem description) from them. This is a direct application of Few-shot Learning for classification/extraction tasks.

Incorrect (A, B, D): While the AI might generate text, summarize, or translate as part of a resolution, the primary purpose of these specific examples is to teach it to categorize or pull out data.

Q#72. You want the AI to write a marketing email for a new product. Which prompt structure is most effective?

A) Just the product name.

B) "Write a marketing email for [Product Name]."

C) "You are a marketing expert. Write a persuasive email for [Product Name] targeting [Audience] with [Key Benefit]. Include a call to action. Keep it under [Word Count] words."

D) "Email marketing is important. Write one."

Answer & Explanation:

Correct (C): This prompt effectively uses Model Role Assignment ("marketing expert"), Clarity and Specificity (product, audience, key benefit, call to action), and Output Control (word count). This comprehensive structure guides the AI to produce a highly relevant and effective email.

Incorrect (A, B, D): These prompts are too vague and lack the necessary context, role, and constraints for a high-quality marketing email.

Q#73. A user asks the AI to generate a story. After the first attempt, they say, "Make the protagonist a bit more conflicted and add a plot twist at the end." This is an example of:

A) Prompt Chaining

B) Few-shot Learning

C) Iterative Refinement

D) Context Window Awareness

Answer & Explanation:

Correct (C): The user is providing feedback on the initial output and asking for specific modifications to improve it, which is the core process of Iterative Refinement.

Incorrect (A): This is a single refinement, not a sequence of dependent tasks.

Incorrect (B): No input-output examples are provided.

Incorrect (D): This is about content modification, not managing token limits.

Q#74. Which of the following is a good practice for 'Context Window Awareness' when working with long documents?

A) Always summarize the entire document before asking any questions.

B) Break the document into logical sections and process them individually.

C) Assume the AI remembers everything from previous conversations.

D) Only ask questions about the first few paragraphs of the document.

Answer & Explanation:

Correct (B): Breaking a long document into logical sections and processing them individually is a key strategy for managing the context window, allowing the AI to focus on relevant parts without exceeding its token limit.

Incorrect (A): Summarizing the entire document might still exceed the context window if the document is extremely long.

Incorrect (C): Relying solely on the AI's memory for long documents is unreliable; explicit context is better.

Incorrect (D): This limits the scope of analysis unnecessarily.

Q#75. A user wants to generate a series of social media posts promoting a new fitness app. They decide to first generate a list of key features, then write a unique selling proposition for each, and finally craft the posts. This is an example of:

A) Iterative Refinement

B) Prompt Chaining

C) Model Role Assignment

D) Output Control

Answer & Explanation:

Correct (B): This is a clear example of Prompt Chaining. The user breaks down the complex task of creating social media posts into sequential, dependent steps: features -> selling propositions -> posts.

Incorrect (A): Iterative refinement would involve refining the posts themselves.

Incorrect (C): No specific role is assigned.

Incorrect (D): While output control might be used within each step, the overall strategy is chaining.

Q#76. **To ensure 'Ethical Considerations and Bias Mitigation', a prompt asking for an image of a 'family' should ideally specify:**

A) A traditional nuclear family.

B) A family with two parents and two children.

C) A diverse family, including various structures, ethnicities, and ages.

D) A family from a specific cultural background.

Answer & Explanation:

Correct (C): To mitigate bias and promote inclusivity, explicitly requesting diversity in family structures, ethnicities, and ages is crucial. This avoids reinforcing narrow or stereotypical definitions of a family.

Incorrect (A, B, D): These options can lead to biased or limited representations of what constitutes a family.

Q#77. **Which of the following prompts demonstrates effective 'Output Control' for a summarization task?**

A) "Summarize this article."

B) "Summarize this article for a 5th grader."

C) "Summarize this article in exactly 100 words, focusing on the key arguments and conclusions."

D) "Summarize this article and tell me if it's good."

Answer & Explanation:

Correct (C): This prompt uses precise Output Control by specifying the exact length (100 words) and the focus (key arguments and conclusions), ensuring a highly targeted summary.

Incorrect (A): This is a general request without specific controls.

Incorrect (B): This controls the audience/tone but not the length or specific focus.

Incorrect (D): This adds an opinion request, which is not a summarization control.

Q#78. **A user wants to generate a short story. They provide the AI with a list of character names and their brief descriptions, and then ask the AI to write a story using those characters. This is an example of using:**

A) Model Role Assignment

B) Few-shot Learning

C) Context as Input

D) Iterative Refinement

Answer & Explanation:

Correct (C): Providing character names and descriptions serves as Context for the story generation. The AI uses this background information to create the narrative, making it an effective use of context as input.

Incorrect (A): No specific role is assigned to the AI.

Incorrect (B): This is providing background context, not input-output examples.

Incorrect (D): This is a single prompt, not a refinement process.

Q#79. **Which of the following is the most specific and actionable prompt for a 'Translation' task?**

A) "Translate this text."

B) "Translate this business proposal from English to Japanese, maintaining a formal and respectful tone, and ensuring all technical terms are accurately rendered."

C) "Translate this into another language."

D) "What is the best way to translate a document?"

Answer & Explanation:

Correct (B): This prompt demonstrates excellent Clarity and Specificity for a translation task. It specifies the source and target languages, the type of document, the desired tone, and a crucial constraint regarding technical terms.

Incorrect (A, C): These are too vague and don't provide enough information for a high-quality translation.

Incorrect (D): This is a question about translation methodology, not a request for translation.

Q#80. A user is writing a prompt for a 'Q&A or factual retrieval' task. Which of the following would be an appropriate instruction?

A) "Write a detailed essay on the history of quantum physics."

B) "What is the capital of Australia?"

C) "Generate a creative story about a talking dog."

D) "Summarize the attached research paper."

Answer & Explanation:

Correct (B): This is a direct, factual question designed to retrieve a specific piece of information, making it ideal for a Q&A or factual retrieval task.

Incorrect (A): This is a text generation task (essay writing).

Incorrect (C): This is a creative text generation task.

Incorrect (D): This is a summarization task.

Q#81. You want the AI to act as a financial advisor. Which of the following prompts would best utilize 'Model Role Assignment' and 'Clarity and Specificity'?

A) "Give me financial advice."

B) "Act as a financial advisor. Explain the pros and cons of investing in real estate versus stocks for a young professional with a moderate risk tolerance, in simple terms."

C) "What is the stock market?"

D) "I need help with my money."

Answer & Explanation:

Correct (B): This prompt effectively assigns the Model Role of a financial advisor and provides high Clarity and Specificity by defining the comparison (real estate vs. stocks), target audience (young professional), risk tolerance (moderate), and desired explanation style (simple terms).

Incorrect (A, D): These are too vague and lack specific context or constraints.

Incorrect (C): This is a factual question, not a request for personalized advice.

Q#82. A user wants to generate a short marketing slogan for a new product. They provide the AI with several examples of successful slogans from other companies. This is an application of:

A) Iterative Refinement

B) Few-shot Learning

C) Prompt Chaining

D) Context Window Awareness

Answer & Explanation:

Correct (B): Providing examples of successful slogans for the AI to learn from is a direct application of Few-shot Learning. It helps the AI understand the desired style, tone, and conciseness of a good slogan.

Incorrect (A): Iterative refinement would involve refining a slogan that the AI has already generated.

Incorrect (C): This is a single prompt, not a sequence of dependent tasks.

Incorrect (D): While the examples consume tokens, the primary principle is learning from them.

Q#83. Which of the following is the most effective way to use 'Output Control' to manage the length of an AI's response?

A) "Be brief."

B) "Keep your response concise."

C) "Respond in no more than 150 words."

D) "Don't write too much."

Answer & Explanation:

Correct (C): This prompt uses a precise numerical constraint ("no more than 150 words"), which is the most effective way to control the length of the AI's response. This is a clear example of Output Control.

Incorrect (A, B, D): These are subjective and vague instructions that the AI might interpret differently, leading to inconsistent lengths.

Q#84. A user is writing a prompt for a 'Text Generation' task. Which of the following details would be most important to include for effective 'Clarity and Specificity'? (Select all that apply)

A) The desired tone (e.g., formal, casual, humorous).

B) The target audience for the generated text.

C) Any specific keywords or phrases that must be included.

D) The exact length in characters or words.

Answer & Explanation:

Correct (A, B, C, D): All these elements contribute significantly to Clarity and Specificity in text generation. Tone (A) and audience (B) guide the writing style. Keywords (C) ensure content relevance. Exact length (D) provides a precise boundary for the output.

Q#85. You want the AI to generate a list of pros and cons for a specific topic. Which prompt structure is most effective for 'Prompt Structure and Format'?

A) "Tell me about the good and bad parts of [Topic]."

B) "Pros and cons of [Topic]."

C) "Task: List the pros and cons of [Topic]. Output: A two-column table with 'Pros' and 'Cons' as headers, and at least 5 points under each."

D) "What are the advantages and disadvantages of [Topic]?"

Answer & Explanation:

Correct (C): This prompt demonstrates excellent Prompt Structure and Format. It clearly states the task, and precisely defines the output format (two-column table, specific headers, minimum number of points), making it easy for the AI to understand and follow.

Incorrect (A, B, D): These are vague and do not specify the desired output format or minimum content, violating good prompt structure.

Q#86. A user wants to summarize a long article. They decide to first extract the main arguments, then extract the supporting evidence for each argument, and finally combine these into a concise summary. This is an example of:

A) Iterative Refinement

B) Few-shot Learning

C) Prompt Chaining

D) Model Role Assignment

Answer & Explanation:

Correct (C): This is a clear example of Prompt Chaining. The complex task of summarization is broken down into sequential, dependent steps (extract arguments -> extract evidence -> combine into summary), where the output of one step feeds into the next.

Incorrect (A): Iterative refinement would involve refining the summary itself.

Incorrect (B): No input-output examples are provided.

Incorrect (D): No specific role is assigned.

Q#87. To avoid bias when asking for images of 'leaders', which prompt would be most aligned with 'Ethical Considerations and Bias Mitigation'?

A) "Generate an image of a powerful leader."

B) "Generate an image of a male leader in a suit."

C) "Generate a diverse set of images of leaders from various backgrounds, genders, and ethnicities, in different leadership contexts."

D) "Generate an image of a typical leader."

Answer & Explanation:

Correct (C): This prompt actively seeks to mitigate bias by explicitly requesting diversity in background, gender, and ethnicity, and showing leaders in various contexts. This counters common stereotypes and promotes inclusivity.

Incorrect (A, B, D): These options are likely to result in stereotypical or biased representations of leaders.

Q#88. A user is debugging a complex software issue. They provide the AI with the error message, the relevant code snippet, and a description of what they've already tried. This is an effective use of:

A) Few-shot Learning

B) Context Window Awareness

C) Output Control

D) Model Role Assignment

Answer & Explanation:

Correct (B): By providing only the relevant information (error message, code snippet, attempted solutions) and avoiding the entire codebase, the user is effectively managing the Context Window to ensure the AI has the necessary data to diagnose the problem without being overwhelmed.

Incorrect (A): No input-output examples are provided.

Incorrect (C): This is about providing input, not controlling output.

Incorrect (D): No specific role is assigned.

Q#89. Which of the following is an example of a 'Classification' task type?

A) "Write a blog post about healthy eating."

B) "Is this email a phishing attempt or legitimate?"

C) "Summarize the key points of this meeting."

D) "Translate this sentence into French."

Answer & Explanation:

Correct (B): This prompt asks the AI to categorize an email into one of two predefined classes ('phishing attempt' or 'legitimate'), which is the core of a Classification task.

Incorrect (A): This is a text generation task.

Incorrect (C): This is a summarization task.

Incorrect (D): This is a translation task.

Q#90. A user wants to generate a short story. They first ask for a plot outline, then for character descriptions, and finally for the story itself based on the previous outputs. This is an example of:

A) Iterative Refinement

B) Few-shot Learning

C) Prompt Chaining

D) Output Control

Answer & Explanation:

Correct (C): This is a classic example of Prompt Chaining. The complex task of writing a story is broken down into sequential, dependent steps (outline -> characters -> story), where the output of one step feeds into the next.

Incorrect (A): Iterative refinement would involve refining the story itself multiple times.

Incorrect (B): No input-output examples are provided.

Incorrect (D): While output control might be used within each step, the overall strategy is chaining.

Q#91. **You want the AI to act as a travel agent. Which of the following prompts would best utilize 'Model Role Assignment' and 'Clarity and Specificity'?**

A) "Plan a trip for me."

B) "Act as a travel agent. Create a 7-day itinerary for a family of four visiting Rome, Italy, interested in history and food, with a moderate budget. Include daily activities, restaurant suggestions, and estimated costs."

C) "What are some good places to visit?"

D) "I need a vacation."

Answer & Explanation:

Correct (B): This prompt effectively assigns the Model Role of a travel agent and provides high Clarity and Specificity by defining the duration (7-day), group (family of four), destination (Rome), interests (history, food), budget (moderate), and desired output details (daily activities, restaurants, costs).

Incorrect (A, C, D): These are too vague and lack the necessary context and constraints for a detailed travel plan.

Q#92. **A user wants to generate a product description. User provides the AI with examples of product descriptions that are concise, benefit-oriented, and use strong action verbs. This is an application of:**

A) Iterative Refinement

B) Few-shot Learning

C) Prompt Chaining

D) Output Control

Answer & Explanation:

Correct (B): Providing examples of desired product descriptions for the AI to learn from is a direct application of Few-shot Learning. It helps the AI understand the desired style, tone, and content structure for effective product descriptions.

Incorrect (A): Iterative refinement would involve refining a product description that the AI has already generated.

Incorrect (C): This is a single prompt, not a sequence of dependent tasks.

Incorrect (D): While the examples imply output control, the primary principle is learning from the examples.

Q#93. Which of the following is the most effective way to use 'Output Control' to manage the tone of an AI's response?

A) "Be nice."

B) "Use a friendly tone."

C) "Respond in a formal academic tone, avoiding colloquialisms."

D) "Don't be rude."

Answer & Explanation:

Correct (C): This prompt uses precise and unambiguous language to define the desired tone ("formal academic tone") and explicitly states what to avoid ("avoiding colloquialisms"). This is a clear example of effective Output Control.

Incorrect (A, B, D): These are subjective and vague instructions that the AI might interpret differently, leading to inconsistent tones.

Q#94. A user is writing a prompt for a 'Code Generation' task. Which of the following details would be most important to include for effective 'Clarity and Specificity'? (Select all that apply)

A) The programming language to use.

B) The function's purpose and expected inputs/outputs.

C) Any specific algorithms or data structures to implement.

D) The desired level of code comments or documentation.

Answer & Explanation:

Correct (A, B, C, D): All these elements contribute significantly to Clarity and Specificity in code generation. The language (A) is fundamental. Purpose, inputs, and outputs (B) define functionality. Algorithms/data structures (C) guide implementation details. Comments/documentation (D) control code quality and readability.

Q#95. You want the AI to generate a summary of a meeting transcript. Which prompt structure is most effective for 'Prompt Structure and Format'?

A) "Summarize this meeting."

B) "Meeting summary."

C) "You are a professional transcriber. Task: Summarize the attached meeting transcript. Output: Key decisions and action items in bullet points, no more than 200 words."

D) "What happened in this meeting?"

Answer & Explanation:

Correct (C): This prompt demonstrates excellent Prompt Structure and Format. It assigns a role ("professional transcriber"), clearly states the task, and precisely defines the output format (bullet points, key decisions/action items, word limit), making it easy for the AI to understand and follow.

Incorrect (A, B, D): These are vague and do not specify the desired output format, content focus, or role, violating good prompt structure.

Q#96. A user wants to write a detailed report on a complex scientific topic. They decide to first ask the AI to explain the core concepts, then to provide relevant research studies, and finally to synthesize all this information into the report. This is an example of:

A) Iterative Refinement

B) Few-shot Learning

C) Prompt Chaining

D) Output Control

Answer & Explanation:

Correct (C): This is a clear example of Prompt Chaining. The user breaks down the complex task of writing a detailed report into sequential, dependent steps (explain concepts -> provide studies -> synthesize into report), where the output of one step feeds into the next.

Incorrect (A): Iterative refinement would involve refining the report itself.

Incorrect (B): No input-output examples are provided.

Incorrect (D): While output control might be used within each step, the overall strategy is chaining.

Q#97. To ensure 'Ethical Considerations and Bias Mitigation', a prompt asking for an image of a 'family' should ideally specify:

A) A traditional nuclear family.

B) A family with two parents and two children.

C) A diverse family, including various structures, ethnicities, and ages.

D) A family from a specific cultural background.

Answer & Explanation:

Correct (C): To mitigate bias and promote inclusivity, explicitly requesting diversity in family structures, ethnicities, and ages is crucial. This avoids reinforcing narrow or stereotypical definitions of a family.

Incorrect (A, B, D): These options can lead to biased or limited representations of what constitutes a family.

Q#98. A user is working with a very large text file (e.g., a book) and wants to extract all character names. They decide to process the book chapter by chapter, extracting names from each, and then compiling a master list. This is an effective use of:

A) Few-shot Learning

B) Context Window Awareness

C) Output Control

D) Model Role Assignment

Answer & Explanation:

Correct (B): By processing the book chapter by chapter, the user is effectively managing the Context Window to ensure that each chunk of text fits within the AI's processing limits. This is a key strategy for handling large inputs.

Incorrect (A): No input-output examples are provided.

Incorrect (C): This is about providing input, not controlling output.

Incorrect (D): No specific role is assigned.

Q#99. Which of the following is an example of an 'Extraction' task type?

A) "Write a summary of this news article."

B) "From the following text, list all dates and monetary values mentioned."

C) "Is this customer review positive or negative?"

D) "Generate a creative story about a robot."

Answer & Explanation:

Correct (B): This prompt asks the AI to identify and pull out specific pieces of information (dates, monetary values) from a larger body of text, which is the definition of an Extraction task.

Incorrect (A): This is a summarization task.

Incorrect (C): This is a classification task.

Incorrect (D): This is a text generation task.

Q#100. Why is 'Task Type Awareness' crucial for effective prompt writing?

A) It helps the AI understand the user's native language.

B) It allows the user to select the most appropriate AI model for the task.

C) It guides the user in structuring the prompt with relevant instructions, context, and constraints specific to the task's nature.

D) It ensures the AI always provides a perfect answer on the first try.

Answer & Explanation:

Correct (C): Understanding the task type (e.g., generation, summarization, classification) is crucial because each type benefits from specific prompt elements. Task Type Awareness helps the user tailor the prompt with the right instructions, context, examples, and output controls to achieve the best results for that particular task.

Incorrect (A): This relates to language understanding, not task type awareness.

Incorrect (B): While true in some advanced scenarios, the primary benefit for prompt writing is guiding the prompt structure itself.

Incorrect (D): No prompt writing principle guarantees a perfect answer on the first try.

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