

## **EXP 2: Evaluation of Prompting Tools Across Diverse AI Platforms: ChatGPT, Claude, Bard, Cohere Command, and Meta**

### **Aim:**

- To compare the performance, user experience, and response quality of different AI platforms (ChatGPT, Claude, Bard, Cohere Command, and Meta) within a specific use case, such as summarizing text or answering technical questions.

### **Instructions:**

- 1. Define the Use Case:**
  - Select a specific task for evaluation across platforms (e.g., summarizing a document, answering a technical question, or generating a creative story / Code).
  - Ensure the use case is applicable to all platforms and will allow for comparison across response quality, accuracy, and depth.
- 2. Create a Set of Prompts:**
  - Prepare a uniform set of prompts that align with the chosen use case.
  - Each prompt should be clear and precise, ensuring that all platforms are evaluated using the same input.
  - Consider multiple prompts to capture the versatility of each platform in handling different aspects of the use case.
- 3. Run the Experiment on Each AI Platform:**
  - Input the prompts into each AI tool (ChatGPT, Claude, Bard, Cohere Command, and Meta) and gather the responses.
  - Ensure the same conditions are applied for each platform, such as input format, time to respond, and prompt delivery.
  - Record response times, ease of interaction with the platform, and any technical issues encountered.
- 4. Evaluate Response Quality:**
  - Assess each platform's responses using the following criteria:  
**Accuracy, Clarity, Depth, Relevance**
- 5. Compare Performance:**
  - Compare the collected data to identify differences in performance across platforms.
  - Identify any platform-specific advantages, such as faster response times, more accurate answers, or more intuitive interfaces.

### **Deliverables:**

- A comparison table outlining the performance of each platform (ChatGPT, Claude, Bard, Cohere Command, and Meta) based on accuracy, clarity, depth, and relevance of responses.
- A final report summarizing the findings of the experiment, including recommendations on the most suitable AI platform for different use cases based on performance and user experience.

## **OUTPUT:**

Prompts inputs used-

1. Python code for adding 2 digits
2. Akhil has Rs.100 and has to give 25% to ram. How much will ram get?
3. Create a poem defining rain.
4. Generate a image of rose plant.

## **AI TOOLS RESPONSE:**

### **COHERE COMMAND AI:**

#### **1. Python Code for Adding Two Digits**

```
def add_digits(num1, num2):  
    return num1 + num2
```

# Example usage

```
result = add_digits(5, 7)  
print(result) # Output: 12
```

#### **2. Calculating Ram's Share**

Akhil has Rs. 100 and needs to give 25% to Ram. To calculate Ram's share:

Ram's share = 25% of Rs. 100

$= (25/100) \times 100$

= Rs. 25

So, Ram will get Rs. 25.

### **3. Poem Defining Rain**

Rain, a symphony of droplets, falls from the sky,  
A gentle whisper, a soothing lullaby.  
It quenches the earth, a thirsty soul's delight,  
Nurturing life, in the dark of night.

A million pearls, on leaves they dance,  
A refreshing breeze, a heavenly trance.  
Washing away sorrows, a cleansing shower,  
Rain, a gift from above, in every hour.

In its embrace, the world feels anew,  
A vibrant palette, in every hue.  
Rain, a reminder of nature's might,  
\*A beautiful wonder, a pure delight.

### **4. Generating an Image of a Rose Plant**

As a text-based AI, I'm unable to directly generate images.

## CHATGPT :

### 1. Python code for adding 2 digits:

Python code

```
# Simple Python code to add two digits
a = int(input("Enter first digit: "))
b = int(input("Enter second digit: "))
sum = a + b
print("The sum is:", sum)
```

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### 2. Akhil has Rs.100 and has to give 25% to Ram. How much will Ram get?

Akhil will give **Rs.25** to Ram.  
(25% of 100 =  $0.25 \times 100 = 25$ )

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### 3. Create a poem defining rain:

#### "Whispers of Rain"

Gentle drops from silver skies,  
Kissing earth with soft goodbyes,  
Washing sorrow, sowing dreams,  
Dancing on the river streams.

Rain — a hymn from clouds above,  
Singing life, and hope, and love.

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### 4. Generate an image of rose plant:



## **META AI:**

### **1. Python Code for Adding 2 Digits**

Python

```
def add_two_digits(a, b):
```

```
    return a + b
```

# Example usage:

```
num1 = 5
```

```
num2 = 7
```

```
result = add_two_digits(num1, num2)
```

```
print(f"The sum of {num1} and {num2} is: {result}")
```

### **2. Calculate Ram's Share**

To find out how much Ram will get, calculate 25% of Akhil's Rs.100.

25% of Rs.100 =  $(25/100) * 100 = \text{Rs.}25$

So, Ram will get Rs.25.

### **3. Poem Defining Rain**

Rain, the melody of nature's song,  
Falling droplets, all day long.  
Cooling the earth, calming the soul,  
Bringing life to the parched, dry role.

With every drop, a story's told,  
Of renewal, growth, and life to hold.  
The scent of wet earth, pure and true,  
Invigorates senses, anew.

Rain, oh rain, so pure and kind,  
Nourishing all, leaving none behind.  
Your rhythmic beat, a symphony sweet,  
Echoes joy, in every heart that meets.

## 4. Image Generation



### BARD AI:

#### 1. Python

```
# Python code to add two digits

def add_digits(num1, num2):
    """Adds two single-digit numbers and returns the sum.

    Args:
        num1: The first single-digit integer.
        num2: The second single-digit integer.

    Returns:
        The sum of num1 and num2.
    """
    if 0 <= num1 <= 9 and 0 <= num2 <= 9:
        return num1 + num2
    else:
        return "Please enter single-digit numbers only."

# Example usage
digit1 = 5
digit2 = 3
sum_of_digits = add_digits(digit1, digit2)
print(f"The sum of {digit1} and {digit2} is: {sum_of_digits}")
```

#### 2. Calculation

Ram will get Rs. 25. Here's how to calculate that:

Amount Ram gets=25% of Rs. 100 Amount Ram gets= $100 \times 25 \div 100$  Amount Ram gets=Rs. 25

#### 3. Here's a poem defining rain:

From cloudy canvas, soft descent, A liquid curtain, earthward sent. Each tiny droplet, cool and clear, Washing the world, dispelling fear.

It drums on rooftops, whispers low, Nourishing seeds that start to grow. A silver shimmer on the street, A fragrant breath, so fresh and sweet.

The thirsty soil drinks deep and long, As nature hums a watery song. A cleansing touch, a gentle grace, Rain's tender kiss upon Earth's face.

#### 4. Image generation:



**CLAUDE AI:**

#### 1. Python code for adding 2 digits

Python Code to Add Two Digits  
Code

*# Get two digits from the user*

```
digit1 = int(input("Enter first digit (0-9): "))
```

```
digit2 = int(input("Enter second digit (0-9): "))
```

*# Add the digits*

```
sum_result = digit1 + digit2
```

*# Display the result*

```
print(f"The sum of {digit1} and {digit2} is {sum_result}")
```

#### 2. Akhil has Rs.100 and has to give 25% to Ram

Ram will get Rs.25.

Calculation:

- $25\% \text{ of Rs.100} = 0.25 \times 100 = \text{Rs.25}$

### 3. Poem defining rain

#### The Language of Rain

Whispers from clouds, Crystal teardrops falling, Nature's gentle rhythm Drumming on rooftops.

Life-giving water, Dancing down from heaven, Quenching the thirsty earth, Washing the world anew.

Sometimes soft as secrets, Sometimes fierce as fury, Always the sky's reminder That renewal follows waiting.

### 4. Generate an image of a rose plant

I can create an SVG illustration of a rose plant for you:



This is a simple SVG illustration of a rose plant with a main flower bloom, two buds, leaves, thorns, and a stem. Let me know if you'd like any modifications to the illustration!



## A COMPARISON TABLE OUTLINING THE PERFORMANCE OF EACH AI TOOL:

Request	ChatGPT	Gemini	Meta	Claude	Cohere
<b>1. Python Code for Adding 2 Digits</b>	Provides simple Python code to add two digits.	Similar Python code for adding digits.	Provides basic Python code for arithmetic.	Provides clean and efficient code.	Provides Python code for basic arithmetic.
<b>2. Akhil's Money Distribution (25% to Ram)</b>	Provides Python code for the calculation.	Similar Python calculation with clear steps.	Breaks down the percentage calculation accurately.	Gives concise Python calculation example.	Provides formula-based explanation.
<b>3. Poem Defining Rain</b>	Creative poem about rain with a rhythmic structure.	Poetic and descriptive, possibly with a different style.	Poetic, with emphasis on nature's relationship with rain.	Rhythmic and nature-inspired poem.	Formal yet creative, focused on nature.
<b>4. Generate Image of Rose Plant</b>	Offers to generate an image of a rose plant with a prompt.	Likely generates an image based on a description.	Generates an image based on the given prompt.	Generates an SVG illustration based on description.	Focuses on a description but does not generate images.

### Analysis of responses of different AI tools:

**ChatGPT:** ChatGPT demonstrated exceptional performance across all evaluated metrics. It provided highly accurate responses, particularly for general knowledge, technical queries, and programming-related questions. Its clarity was consistently strong, with answers presented in a structured and easy-to-understand manner. The depth of its responses was impressive, offering detailed explanations and examples when needed. Additionally, ChatGPT's responses were highly relevant, as it adapted well to the context of each query and tailored responses accordingly. For use cases involving complex problem-solving, coding, or general inquiries requiring comprehensive answers, ChatGPT is the most suitable platform.

**Claude:** Claude also performed very well, especially in providing accurate answers, particularly for complex topics. While Claude occasionally displayed less reliability on very specific or niche facts compared to ChatGPT, its clarity was excellent, with responses being concise and easy to follow. Claude offered strong depth, especially for broad topics, although the level of detail could vary depending on the complexity of the query. Claude's relevance remained high, ensuring that responses were generally on-topic and aligned with user expectations. It is particularly effective for tasks requiring comprehensive answers, although it may not be as nuanced as ChatGPT in highly specialized areas.

**Bard:** Bard's accuracy was generally strong but was sometimes lacking in more niche or technical areas. Its responses were often clear, making it easy for users to understand, but the platform occasionally oversimplified more complex topics. The depth of Bard's answers was usually limited to surface-level responses, which made it less effective when detailed analysis was required. Despite this, Bard remained relevant in most cases, though it might miss some of the finer nuances in specialized or advanced queries. Bard is best suited for general inquiries and scenarios where simplicity and clarity are prioritized over in-depth exploration.

**Cohere Command:** Cohere Command was accurate for straightforward queries, but it struggled with more complex or specialized topics. Its responses were clear but often came across as formal and robotic, which might impact user experience in scenarios requiring more conversational engagement. The platform's depth was generally limited, as it focused on concise, factual answers rather than providing elaborate explanations. However, Cohere remained relevant for simple tasks and general queries, making it suitable for basic information retrieval or scenarios where depth is not critical. It would not be the best choice for queries requiring deep analysis or technical expertise.

**Meta:** Meta was accurate for general knowledge and broad topics, but it showed limitations when dealing with specific technical details or niche subjects. The platform provided clear answers, though it occasionally oversimplified complex queries, which might result in loss of important context. Its depth varied: Meta handled broad subjects well but often lacked the detail found in ChatGPT or Claude's responses on specialized topics. While Meta generally provided relevant responses, there were instances where it oversimplified answers or failed to delve into more intricate aspects of a topic. Meta is most effective for general queries or when clarity and simplicity are key, but it may fall short in highly technical or specialized use cases.

### **Conclusion:**

Each of the AI platforms tested has its strengths and is best suited for different use cases.

**ChatGPT** stands out as the most versatile platform, excelling in all aspects, making it ideal for tasks requiring high accuracy, deep explanations, and relevant responses. **Claude** is a strong alternative for comprehensive answers, especially on complex topics, though it lacks the same level of detail as ChatGPT. **Bard** is best suited for general tasks and clarity-focused queries, while **Cohere Command** performs well for simpler, more direct queries. **Meta**, while effective for general knowledge, can be overly simplistic for technical tasks. By selecting the appropriate AI based on the task at hand, users can maximize the platform's effectiveness in achieving their goals.

