# Week 2 Assignment – Exploring Prompt Engineering

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**Part 1** – Prompt Engineering Task

**Task Chosen: *Generate a travel adventure story***

**Prompt 1 (Concise):**

*"Tell me a short story about someone traveling to a new place."*  
**AI Response:**  
Lina boarded a train to a mountain town she had never seen. Lost but excited, she wandered into a small café. A stranger handed her a map with a smile, and that chance meeting led to a lifelong friendship.

**Prompt 2 (Medium length):**

*"Write a story about a young traveler who discovers something unexpected on their journey."*  
**AI Response:**  
Arjun set out to backpack across the Himalayas, carrying only his camera and journal. During a trek, he stumbled upon a hidden monastery guarded by prayer flags fluttering in the wind. Inside, he found monks who welcomed him warmly and taught him lessons of mindfulness. His journey became more about self-discovery than sightseeing.

**Prompt 3 (Detailed):**

*"Generate a detailed story about a solo traveler visiting a foreign city and the city is beautiful and antique , where they get lost in the streets but end up finding a hidden place that changes their perspective on life."*

**AI Response:**  
Maria arrived in Venice with a guidebook, but the labyrinth of canals soon swallowed her plans. Tired and frustrated, she wandered into a quiet alley where she found a tiny art gallery owned by an elderly painter. He spoke of how the city had shaped his art, teaching patience and wonder. Maria spent the evening learning to paint by the canal’s edge, realizing travel was not about following maps but about losing herself to find new pieces of life.

**Reflection (150–200 words):**

This experiment highlights how the structure and detail of prompts greatly influence AI outputs. The **concise prompt** yielded a very short, simple narrative with little depth—suitable for quick storytelling but lacking in emotional or descriptive detail. The **medium prompt** added context (“young traveler” and “unexpected discovery”), which guided the AI to produce a more developed plot with a clear theme of growth. The **detailed prompt** provided the richest result, with vivid imagery, specific settings, and a moral reflection at the end.

What worked well was how progressively detailed prompts gave the AI space to expand the story’s world and characters. While the concise version was efficient, it lacked immersion. The medium and detailed prompts encouraged creativity and depth, showing how prompt specificity directly shapes narrative quality. To improve, I could experiment further with tone (casual vs. formal) or genre (mystery, fantasy, humor) to see how style instructions alter the storytelling. Overall, the exercise proves that carefully designed prompts produce richer, more meaningful outputs.

**Part 2 –** Python Program: Basic Calculator with Error Handling

def add(a, b):

    return a + b

def subtract(a, b):

    return a - b

def multiply(a, b):

    return a \* b

def divide(a, b):

    try:

        return a / b

    except ZeroDivisionError:

        return "Error: Division by zero is not allowed."

def power(a, b):

    return a \*\* b

def calculator():

    while True:

        print("\\n----- Basic Calculator -----")

        print("1. Addition")

        print("2. Subtraction")

        print("3. Multiplication")

        print("4. Division")

        print("5. Power (Bonus)")

        print("6. Exit")

        choice = input("Enter your choice (1-6): ")

        if choice == '6':

            print("Exiting the calculator. Goodbye!")

            break

        try:

            num1 = float(input("Enter the first number: "))

            num2 = float(input("Enter the second number: "))

        except ValueError:

            print("Error: Please enter valid numeric values.")

            continue

        if choice == '1':

            print("Result:", add(num1, num2))

        elif choice == '2':

            print("Result:", subtract(num1, num2))

        elif choice == '3':

            print("Result:", multiply(num1, num2))

        elif choice == '4':

            print("Result:", divide(num1, num2))

        elif choice == '5':

            print("Result:", power(num1, num2))

        else:

            print("Invalid choice. Please choose a valid option.")

if \_\_name\_\_ == "\_\_main\_\_":

    calculator()

