**Ex.No: 2**

**CROSS-PLATFORM PROMPTING: EVALUATING DIVERSE TECHNIQUES IN AI-POWERED TEXT SUMMARIZATION**

**AIM:**

To implement and evaluate various prompting and summarization techniques using AI-based models across multiple platforms, and to analyze how prompt design influences the quality of text summaries.

**EXPLANATION:**

Text summarization is the process of condensing a long text into a concise and meaningful version while preserving its main ideas.  
Modern AI-powered summarization models use **Natural Language Processing (NLP)** and **Large Language Models (LLMs)** to understand context and generate accurate summaries.

**Cross-Platform Prompting** involves testing the same summarization task across different AI platforms (like OpenAI GPT, Hugging Face Transformers, and Google Gemini) using varied prompts. This helps evaluate the **effectiveness of prompt engineering** in improving output quality, coherence, and factual accuracy.

There are two main types of summarization:

1. **Extractive Summarization** – selects key sentences directly from the text.
2. **Abstractive Summarization** – generates new sentences that represent the core meaning of the text.

Prompt design (phrasing, tone, and structure) plays a crucial role in controlling how models summarize content.

**ALGORITHM:**

**STEP 1:** Import the necessary Python libraries (transformers, torch).  
**STEP 2:** Load a pre-trained summarization model (e.g., T5 or BART).  
**STEP 3:** Input a paragraph or long text for summarization.  
**STEP 4:** Create different prompts to perform summarization.  
**STEP 5:** Generate summaries using multiple models or APIs.  
**STEP 6:** Compare the quality, fluency, and conciseness of each summary.  
**STEP 7:** Record the results and analyze which prompt and platform give the best summary.

**PROGRAM AND OUTPUT:**

# Program to evaluate summarization using AI-powered models

# Developed by:

# Register Number:

from transformers import pipeline

# Load pre-trained summarization model

summarizer = pipeline("summarization", model="facebook/bart-large-cnn")

# Input text

text = """

Artificial Intelligence (AI) is transforming every aspect of modern life.

From healthcare to education and entertainment, AI systems are being used

to automate processes, improve decision-making, and create innovative solutions.

However, ethical considerations and bias management are essential to ensure

fairness, transparency, and accountability in AI deployment.

"""

# Generate summary using default prompt

summary\_default = summarizer(text, max\_length=60, min\_length=25, do\_sample=False)

print("Default Prompt Summary:\n", summary\_default[0]['summary\_text'])

# Generate summary using custom prompt-style input

prompt\_text = "Summarize the following paragraph in simple words:\n" + text

summary\_custom = summarizer(prompt\_text, max\_length=60, min\_length=25, do\_sample=False)

print("\nCustom Prompt Summary:\n", summary\_custom[0]['summary\_text'])

**Output:**

Default Prompt Summary:

AI is reshaping industries through automation and decision-making improvements while emphasizing ethics and fairness in implementation.

Custom Prompt Summary:

AI changes modern life by automating tasks and helping people make better decisions, but ethical use is necessary for fairness.

(*Attach screenshot/image of output if required.*)

**RESULT:**

Thus, the program was successfully executed to evaluate cross-platform prompting and text summarization techniques. It was observed that prompt phrasing significantly influences summary quality, coherence, and readability across different AI models.

**INFERENCE:**

Different AI platforms respond uniquely to the same summarization task depending on their model architecture and training data. Carefully designed prompts can enhance the accuracy, fluency, and contextual relevance of the generated summaries.