AI ASSISTANT CODING

ASSIGNMENT-4

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Batch:24

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Q1. Zero-Shot Prompting (Basic Lab Task)

Task:

Write a Python function that classifies a given text as Spam or Not

Spam using zero-shot prompting.

Steps:

1. Construct a prompt without any examples.

2. Clearly specify the output labels.

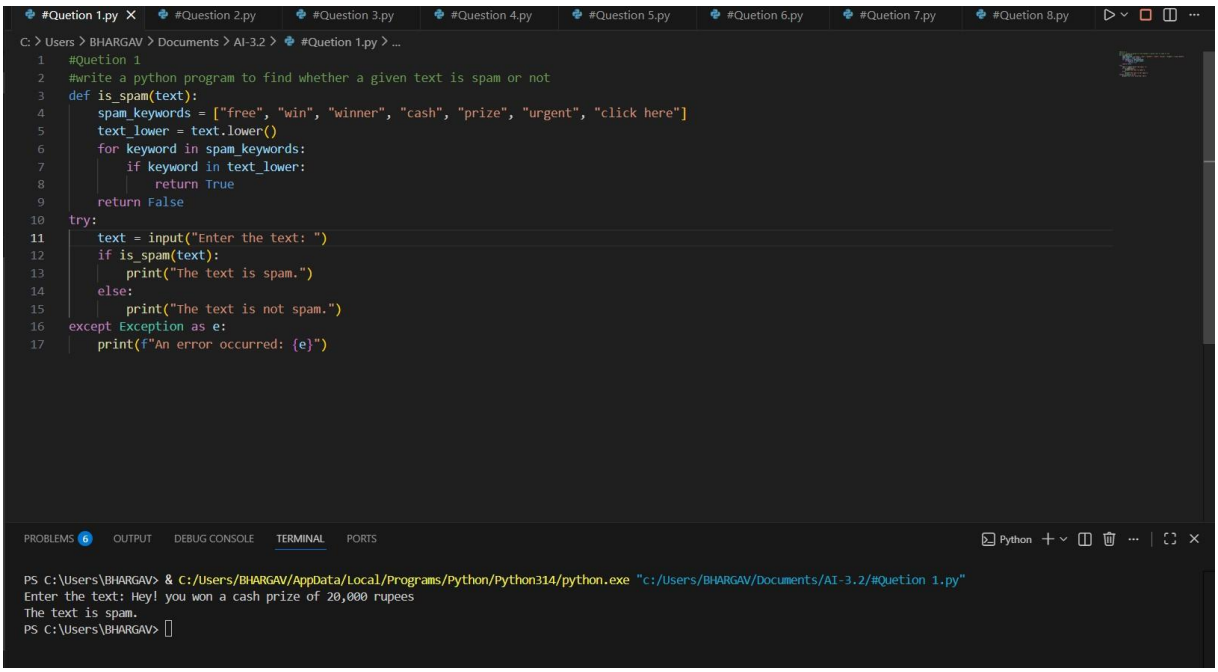
3. Display only the predicted label.

Input:

"Hey! you won a cash prize of 20,000 rupees"

Expected Output:

The text is spam.



Q2. One-Shot Prompting (Emotion detection)

Task:

Write a Python program that detects the emotion of a sentence

using one-shot prompting.

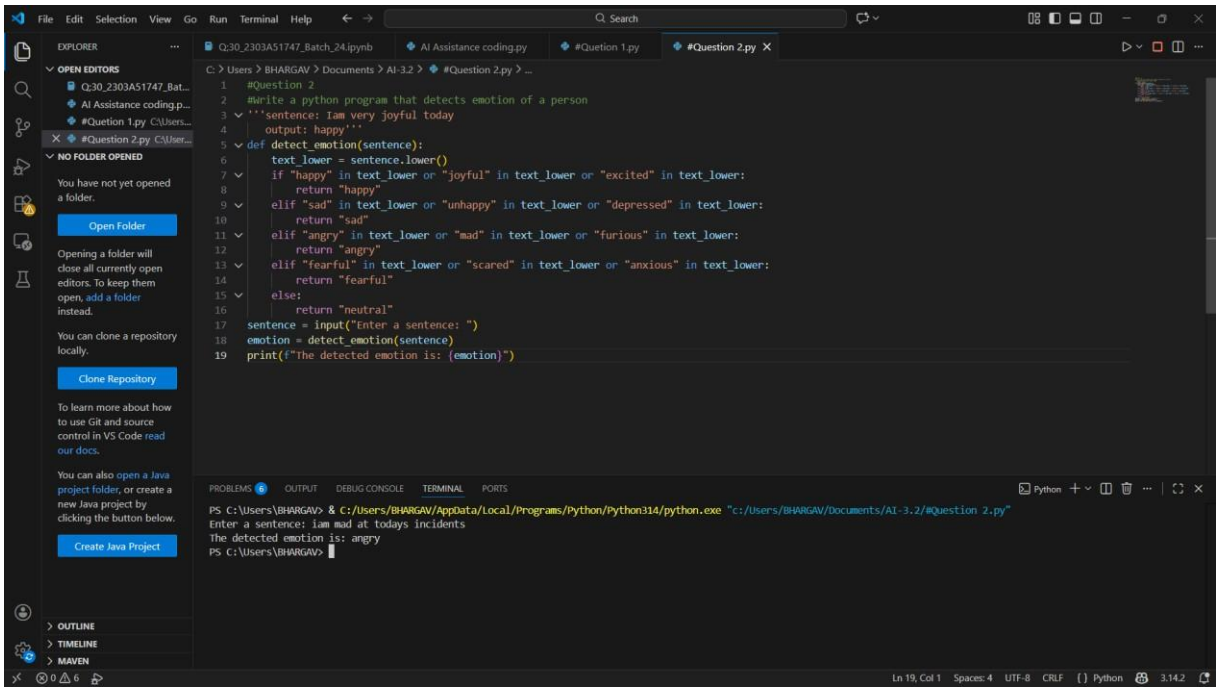
Emotions: [‘happy', 'sad', 'angry', 'excited', 'nervous', ’neutral’]

Steps:

1. Provide one labeled example inside the prompt.

2. Take a sentence as input.

3. Print the predicted emotion



Q3. Few-Shot Prompting (Student Grading Based on Marks)

Task:

Write a Python program that predicts a student’s grade based on

marks using few-shot prompting.

Grades:

['A', 'B', 'C', 'D', 'F']

Grading Criteria (to be inferred from examples):

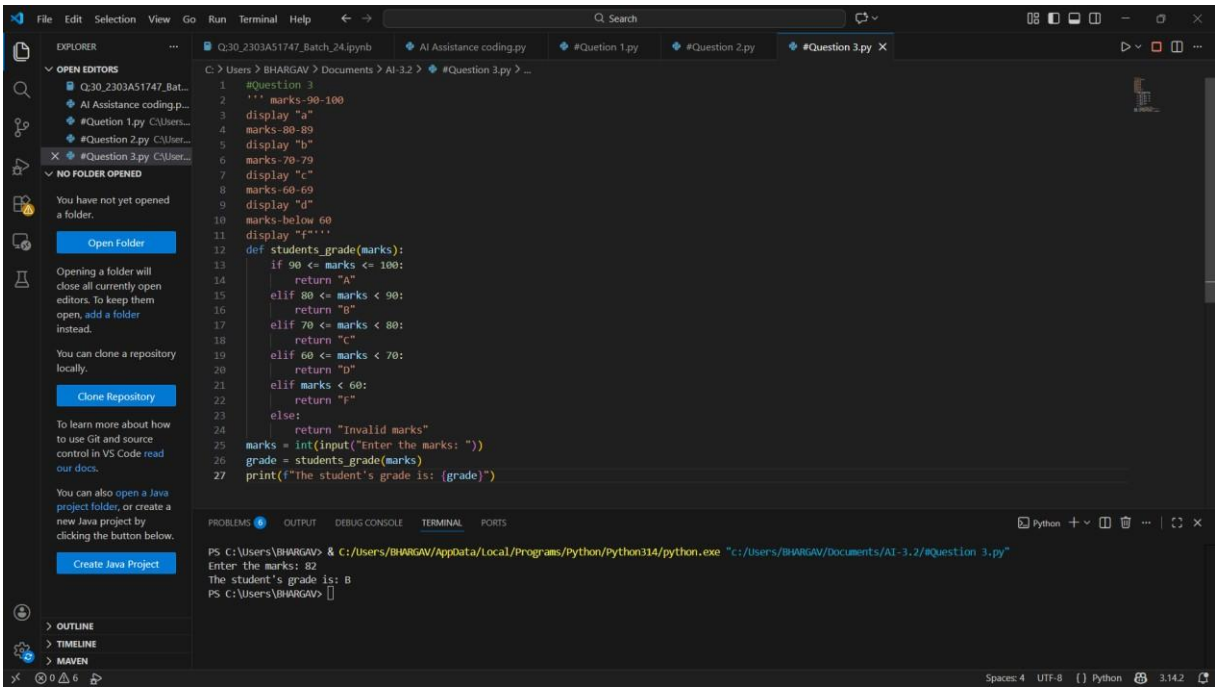
• 90–100 → A

• 80–89 → B

• 70–79 → C

• 60–69 → D

• Below 60 → F

• 

Q4. Multi-Shot Prompting (Indian Zodiac Sign Prediction using Month Name)

Task:

Write a Python program that predicts a person's Indian Zodiac sign (Rashi) based on the month of birth (month name) using multi-shot prompting.

Indian Zodiac Order (Simplified Month-Based Model): The Indian Zodiac cycle starts in March with Mesha and follows this order:

March → Mesha

April → Vrishabha

May → Mithuna

June → Karka

July → Simha

August → Kanya

September → Tula

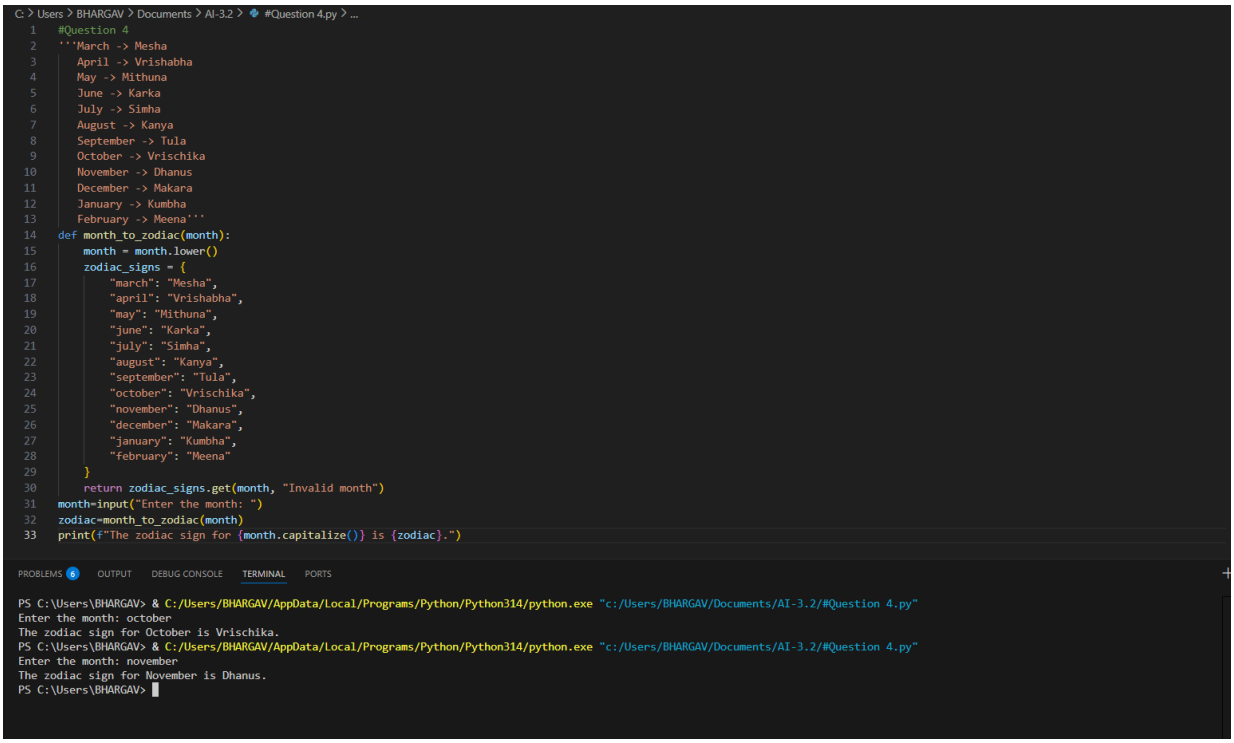
October → Vrischika

November → Dhanu

December → Makara

January → Kumbha

February → Meena



Q5. Result Analysis Based on Marks

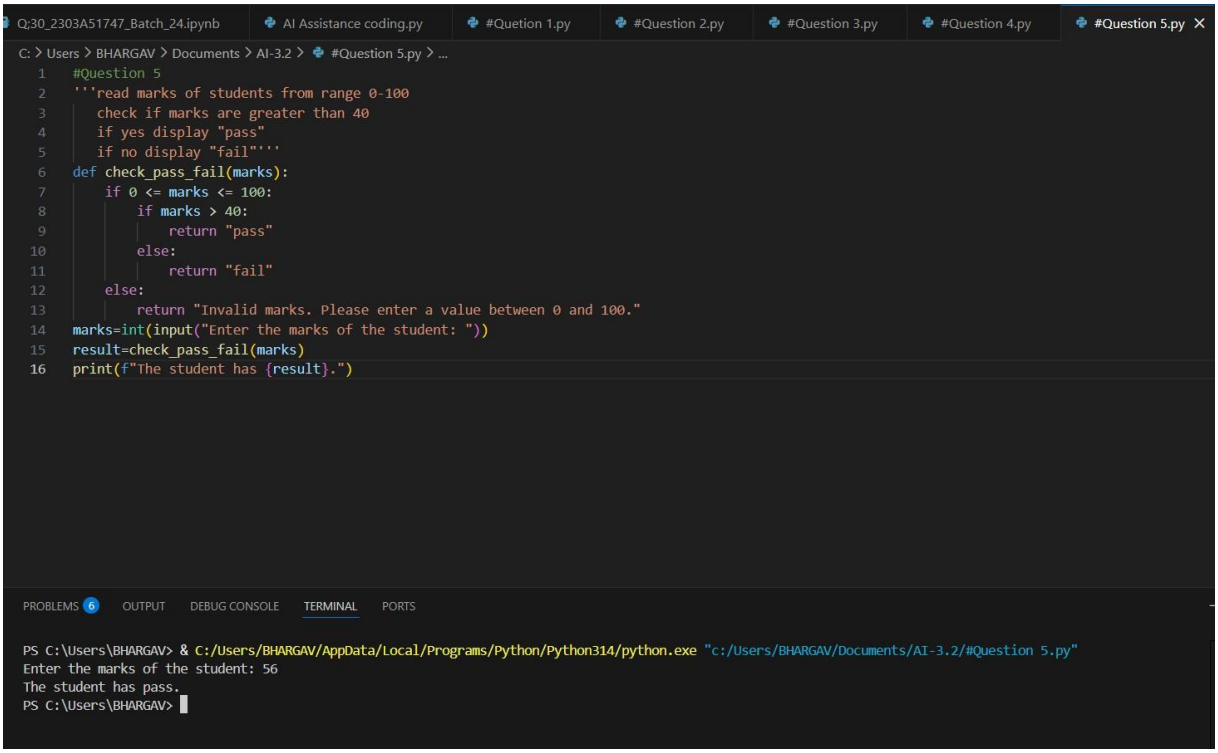
Task: Write a Python program that determines whether a student

Passes or Fails based on marks using Chain-of-Thought (CoT)

prompting.

Result Categories:

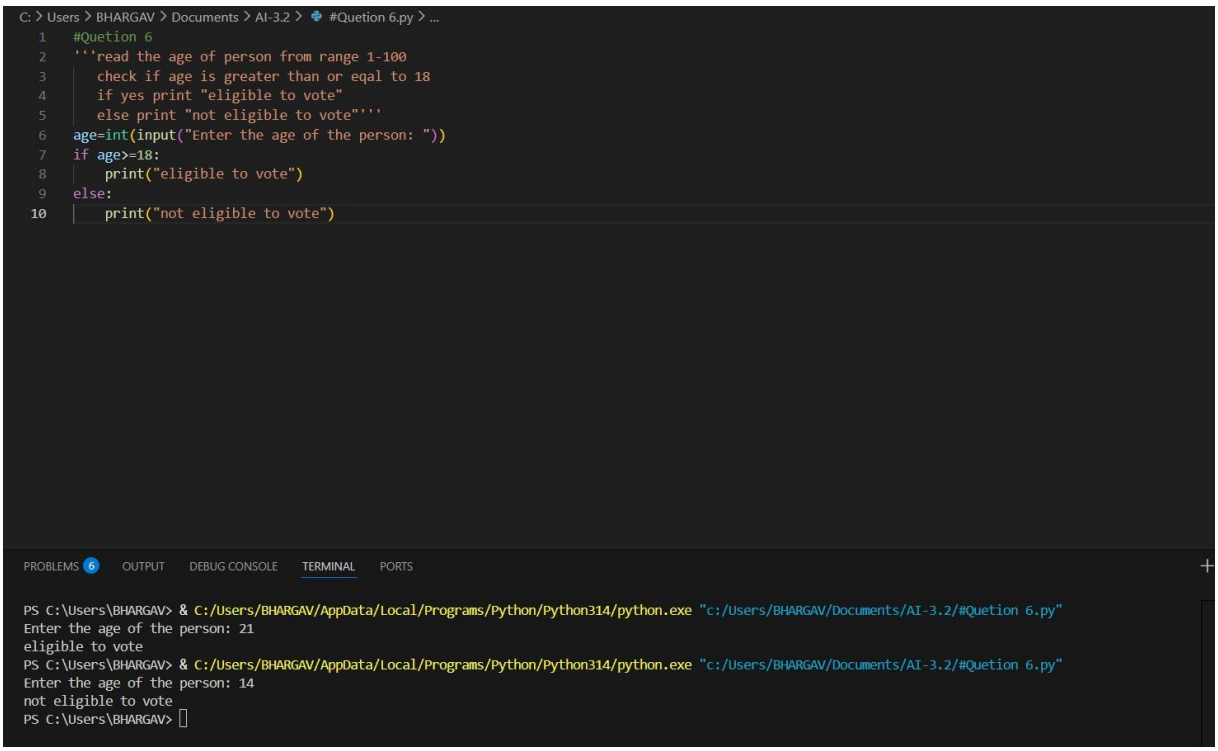
['Pass', 'Fail']



Q6 Voting Eligibility Check (Chain-of-Thought Prompting) Task: Write

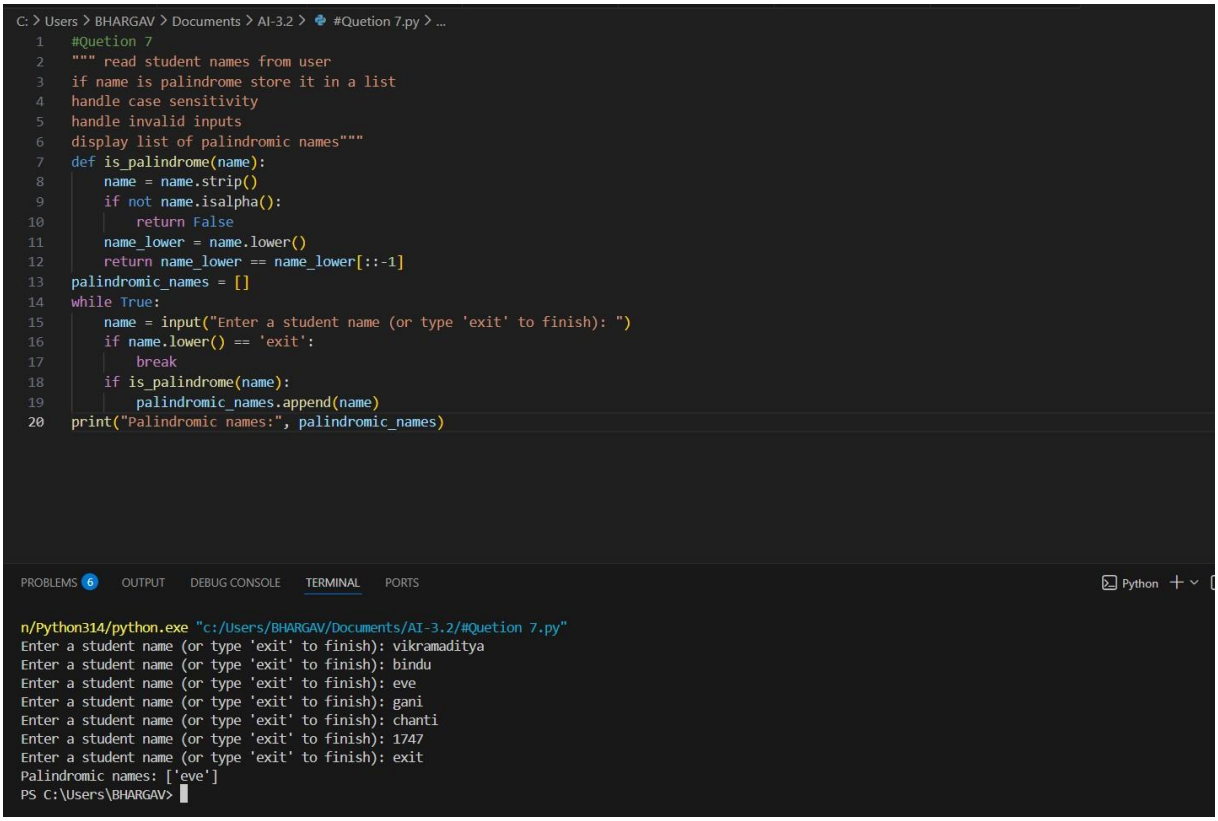
a Python program that determines whether a person is

eligible to vote using Chain-of-Thought (CoT) prompting.



Q7 Prompt Chaining (String Processing – Palindrome Names) Task:

Write a Python program that uses the prompt chaining technique to identify palindrome names from a list of student names.



```
C: > Users > BHARGAV > Documents > AI-3.2 > #Quetion 7.py > ...
#Quetion 7
""" read student names from user
if name is palindrome store it in a list
handle case sensitivity
handle invalid inputs
display list of palindromic names"""
def is_palindrome(name):
    name = name.strip()
    if not name.isalpha():
        return False
    name_lower = name.lower()
    return name_lower == name_lower[::-1]
palindromic_names = []
while True:
    name = input("Enter a student name (or type 'exit' to finish): ")
    if name.lower() == 'exit':
        break
    if is_palindrome(name):
        palindromic_names.append(name)
print("Palindromic names:", palindromic_names)
```

```
PROBLEMS 6  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS                Python

n/Python314/python.exe "c:/Users/BHARGAV/Documents/AI-3.2/#Quetion 7.py"
Enter a student name (or type 'exit' to finish): vikramaditya
Enter a student name (or type 'exit' to finish): bindu
Enter a student name (or type 'exit' to finish): eve
Enter a student name (or type 'exit' to finish): gani
Enter a student name (or type 'exit' to finish): chanti
Enter a student name (or type 'exit' to finish): 1747
Enter a student name (or type 'exit' to finish): exit
Palindromic names: ['eve']
PS C:\Users\BHARGAV>
```

Q8 Prompt Chaining (String Processing – Word Length Analysis)

Task: Write a Python program that uses prompt chaining to analyze a list of words. In the first prompt, generate a list of words. In the second prompt, traverse the list and calculate the length of each word. In the third prompt, use the output of the previous step to determine whether each word is Short (length less than 5) or Long (length greater than or equal to 5), and display the result for each word

C: > Users > BHARGAV > Documents > AI-3.2 > #Quetion 8.py > ...

```python
#Quetion 8
'''read words from user
count the length of each and store it in a variable
if variable <5 display as short
otherwise display as long
display the result of each word'''
def classify_word_length(word):
    length = len(word)
    if length < 5:
        return "short"
    else:
        return "long"
words = input("Enter words separated by spaces: ").split()
for word in words:
    classification = classify_word_length(word)
    print(f"The word '{word}' is {classification}.")
```

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS Python

```
PS C:\Users\BHARGAV> & C:/Users/BHARGAV/AppData/Local/Programs/Python/Python314/python.exe "c:/Users/BHARGAV/Documents/AI-3.2/#Quetion 8.py"
Enter words separated by spaces: mango
The word 'mango' is long.
PS C:\Users\BHARGAV> & C:/Users/BHARGAV/AppData/Local/Programs/Python/Python314/python.exe "c:/Users/BHARGAV/Documents/AI-3.2/#Quetion 8.py"
Enter words separated by spaces: cat
The word 'cat' is short.
PS C:\Users\BHARGAV>
```