In [16]:
```
def unique_sorted_letters(text):
    return sorted(set(text)) # set put the letters in random order

user_input=input("Enter something : ")
print(f'The unique letters in the text {user_input} are =',unique_sorted_letters(user_input))  # Output: exampl
```

```
The unique letters in the text prasanna are = ['a', 'n', 'p', 'r', 's']
```

In [5]:
```
# Function to return letters that appear in at least one of the two words
def letters_in_at_least_one(first_word, second_word):
    return sorted(set(first_word) | set(second_word))

# Function to return letters that appear in both words
def letters_in_both(first_word, second_word):
    return sorted(set(first_word) & set(second_word))

# Function to return letters that appear in either word, but not in both
def letters_in_either_but_not_both(first_word, second_word):
    return sorted(set(first_word) ^ set(second_word))

# input taking
first_word = input("Enter the first word")
second_word = input("Enter the second word")

# function calling and printing
print(letters_in_at_least_one(first_word, second_word))  # Output: ['a', 'e', 'g', 'l', 'n', 'o', 'p', 'r']
print(letters_in_both(first_word, second_word))          # Output: ['a', 'e']
print(letters_in_either_but_not_both(first_word, second_word))  # Output: ['g', 'l', 'n', 'o', 'p', 'r']
```

```
['a', 'e', 'h', 'n', 'p', 'r', 's', 'w']
['a', 'n', 's']
['e', 'h', 'p', 'r', 'w']
```

In [17]:
```
def dic_countries():
    countries_capitals = {}

    while True:
        country = input("Enter the name of a country (or 'exit' to quit): ").strip().lower()
        if country == 'exit':
            break
        if country in countries_capitals:
            print(f"The capital of {country.capitalize()} is {countries_capitals[country]}.")
        else:
            capital = input(f"Enter the capital of {country.capitalize()}: ").strip()
            countries_capitals[country] = capital
            print(f"{capital} has been added as the capital of {country.capitalize()}.")

# Run the program
dic_countries()
```

```
Kathmandu has been added as the capital of Nepal.
Delhi has been added as the capital of India.
The capital of Nepal is Kathmandu.
```

In [18]:
```
from collections import Counter

def most_common_letters(message):
    # Convert the message to lowercase
    message = message.lower()
    # Count the frequency of alphabetic characters
    letter_counts = Counter(filter(str.isalpha, message))
    # Get the six most common letters
    most_common = letter_counts.most_common(6)
    return most_common

# Get user input
message = input("Enter a message to see common letters within the message: ")

# Call the function and store the result
top_six = most_common_letters(message)

# Print the six most common letters
print("The six most common letters are:")
for letter, count in top_six:
    print(f"{letter}: {count}")
```

```
The six most common letters are:
o: 4
t: 3
i: 2
h: 2
a: 2
e: 2
```

In [ ]: