

Problem 1: Temperature Converter

Scenario: You are developing a weather app that needs to display temperatures in both Celsius and Fahrenheit.

Description: Write a script that converts a given temperature from Celsius to Fahrenheit.

Sample Input:

```
celsius = 25
```

Sample Output:

```
fahrenheit = 77.0
```

Problem 2: Simple Calculator

Scenario: You are building a simple calculator app that can perform basic arithmetic operations: addition, subtraction, multiplication, and division.

Description: Write a script that takes two numbers and an operator (+, -, *, /) and performs the corresponding arithmetic operation.

Sample Input:

```
num1 = 10  
num2 = 5  
operator = '+'
```

Sample Output:

```
result = 15
```

Problem 3: Word Count

Scenario: You are creating a text editor that provides basic statistics about the text, such as the number of words.

Description: Write a script that counts the number of words in a given string.

Sample Input:

```
text = "Hello world, this is a test."
```

Sample Output:

```
word_count = 6
```

Problem 4: Even or Odd

Scenario: You are developing a game that requires checking if a number is even or odd.

Description: Write a script that checks whether a given number is even or odd.

Sample Input:

```
number = 7
```

Sample Output:

```
is_even = False
```

Problem 5: Find Maximum

Scenario: You are writing a utility function for a statistics tool that finds the maximum value in a list of numbers.

Description: Write a script that finds the maximum value in a given list of numbers.

Sample Input:

```
numbers = [3, 5, 7, 2, 8]
```

Sample Output:

```
max_value = 8
```

Problem 6: Reverse String

Scenario: You are developing a feature for a messaging app that allows users to reverse the text they have written.

Description: Write a script that reverses a given string.

Sample Input:

```
text = "hello"
```

Sample Output:

```
reversed_text = "olleh"
```

Problem 7: Sum of List

Scenario: You are building a financial app that needs to calculate the total of a list of expenses.

Description: Write a script that calculates the sum of all the numbers in a given list.

Sample Input:

```
expenses = [100, 200, 50, 75]
```

Sample Output:

```
total_expenses = 425
```

Problem 8: Count Vowels

Scenario: You are creating a language learning app that provides statistics on text, such as the number of vowels.

Description: Write a script that counts the number of vowels in a given string.

Sample Input:

```
text = "education"
```

Sample Output:

```
vowel_count = 5
```

Problem 9: Check Prime

Scenario: You are developing a tool for a math class that checks if a number is prime.

Description: Write a script that checks whether a given number is a prime number.

Sample Input:

```
number = 11
```

Sample Output:

```
is_prime = True
```

Problem 10: Remove Duplicates

Scenario: You are working on a data cleaning tool that removes duplicate entries from a list.

Description: Write a script that removes duplicate elements from a given list.

Sample Input:

```
items = [1, 2, 2, 3, 4, 4, 5]
```

Sample Output:

```
unique_items = [1, 2, 3, 4, 5]
```