Python Masterclass-1 Assignment Answers

1. Write a Python program to display "Hello, World!" on the console.

Answer: `print("Hello, World!")`

2. Write a Python program that prompts the user to enter two numbers, and then performs the following operations:

Addition: Print the sum of the two numbers.

Subtraction: Print the difference between the two numbers.

Multiplication: Print the product of the two numbers.

Division: Print the result of dividing the first number by the second number.

Answer:

```
# Prompt the user to enter two numbers
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))

# Perform addition
sum_result = num1 + num2
print("Sum:", sum_result)

# Perform subtraction
diff_result = num1 - num2
print("Difference:", diff_result)

# Perform multiplication
prod_result = num1 * num2
print("Product:", prod_result)

# Perform division
div_result = num1 / num2
print("Division:", div_result)
```

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3. Write a Python program that calculates the area and perimeter of a rectangle. Prompt the user to enter the length and width of the rectangle, and then calculate and print the area and perimeter.

Answer:

```
# Prompt the user to enter the length and width of the rectangle
length = float(input("Enter the length of the rectangle: "))
width = float(input("Enter the width of the rectangle: "))

# Calculate the area of the rectangle
area = length * width

# Calculate the perimeter of the rectangle
perimeter = 2 * (length + width)

# Print the area and perimeter
print("Area:", area)
print("Perimeter:", perimeter)
```

Optional Advanced-level question:

Write a Python program to convert temperature in Celsius to Fahrenheit. The formula to convert Celsius to Fahrenheit is: F = (C * 9/5) + 32, where F is the temperature in Fahrenheit and C is the temperature in Celsius.

Answer:

```
# Prompt the user to enter the temperature in Celsius
celsius = float(input("Enter the temperature in Celsius: "))

# Convert Celsius to Fahrenheit using the formula F = (C * 9/5) + 32
fahrenheit = (celsius * 9/5) + 32

# Print the converted temperature in Fahrenheit
print("Temperature in Fahrenheit:", fahrenheit)
```