Day 1 Problems: Introduction to Python

Problem 1: Hello, World!

Objective: Write a program that prints "Hello, World!".
Solution:python Copy code

```python
print("Hello, World!")
```

Problem 2: Basic Arithmetic

Objective: Write a program that performs basic arithmetic operations (addition, subtraction, multiplication, division) and prints the results.
Solution:python Copy code

```python
print(10 + 5)    # Addition
print(10 - 5)    # Subtraction
print(10 * 5)    # Multiplication
print(10 / 5)    # Division
```

Problem 3: Variable Assignment

Objective: Write a program that assigns values to variables and prints them.
Solution:python Copy code

```python
name = "Alice"
age = 25
height = 5.5
is_student = True

print("Name:", name)
print("Age:", age)
print("Height:", height)
print("Is student:", is_student)
```

Problem 4: User Input

Objective: Write a program that asks the user for their name and greets them.
Solution:python Copy code

```python
user_name = input("Enter your name: ")
print("Hello, " + user_name + "!")
```

Problem 5: Simple Calculator

Objective: Write a program that takes two numbers as input from the user and performs addition, subtraction, multiplication, and division on them. Print the results.
Solution:python Copy code

```python
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

print("Addition:", num1 + num2)
print("Subtraction:", num1 - num2)
print("Multiplication:", num1 * num2)
print("Division:", num1 / num2)
```