Design and implement a simple command-line calculator application in Python, utilizing functions to perform basic arithmetic operations. The primary objective is to create an interactive and user-friendly calculator that allows users to perform:

1.addition 2.subtraction 3.Multiplication 4.division on two input numbers. The project aims to demonstrate proficiency in function-based programming, user input validation, and code organization. The end result should be a functional and well-structured calculator application that provides a seamless user experience while adhering to best practices in Python programming.

In [1]:

```
def add(x, y):
    return x + y

def subtract(x, y):
    return x - y

def multiply(x, y):
    return x * y

def divide(x, y):
    if y == 0:
        return "Error: Cannot divide by zero!"
    else:
        return x / y



def get_operation():
    print("Select operation:")
    print("1. Addition")
    print("2. Subtraction")
    print("3. Multiplication")
    print("4. Division")
    while True:
        choice = int(input("Enter choice (1/2/3/4): "))
        if choice in [1, 2, 3, 4]:
            return (choice)
        else:
            print("Invalid input. Please enter 1, 2, 3, or 4.")

def calculator():
    while True:
        # Get user input for numbers and operation
        num1 = eval(input("Enter first number: "))
        num2 = eval(input("Enter second number: "))
        operation = get_operation()

        # Perform operation
        if operation == 1:
            print("Result:", add(num1, num2))
        elif operation == 2:
            print("Result:", subtract(num1, num2))
        elif operation == 3:
            print("Result:", multiply(num1, num2))
        elif operation == 4:
            print("Result:", divide(num1, num2))
        else:
             print("Invalid input. Please enter 1, 2, 3, or 4.")

        # Ask if the user wants to perform another calculation
        another_calculation = input("Do you want to perform another calcula
        if another_calculation.lower() != 'yes':
            print("Goodbye!")
            break

# starting the program
print("Calculator")
calculator()
```

```
Calculator
Enter first number: 2
Enter second number: 2
Select operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter choice (1/2/3/4): 1
Result: 4
Do you want to perform another calculation? (yes/no): yes
Enter first number: 3
Enter second number: 5
Select operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter choice (1/2/3/4): 3
Result: 15
Do you want to perform another calculation? (yes/no): YES
Enter first number: 3
Enter second number: 1
Select operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter choice (1/2/3/4): 2
Result: 2
Do you want to perform another calculation? (yes/no): yEs
Enter first number: 4
Enter second number: 2
Select operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter choice (1/2/3/4): 4
Result: 2.0
Do you want to perform another calculation? (yes/no): no
Goodbye!
```

In [ ]: