

GROUP PROJECT- GROUP NUMBER 06

GROUP MEMBERS-

- SIRIWARDHANA MUDIYANSELAGE NALAKA PRIYANKARA SIRIWARDHANA
- THILNI SANDUMINI DIAS SUBASINGHE NISSANKA
- PATHTHUWE ARACHCHIGE UDESHIKA SANDAMALI
- MAE FLORENCE QUINTO LOAYON

QUESTION NUMBER 02- We have to build a program that can be used as a basic calculator. Our program have a menu displayed for the user to choose from, where are listed are listed basic operations: Addition, Subtraction, Multiplication, Division, Second power, Square root, and exit. The program allows the user to choose the desired operation over and over again until user chooses to quit using it.

Calculator

```
In [ ]: import math

def display_menu():
    print("\nBasic Calculator Menu:")
    print("1. ADDITION")
    print("2. SUBTRACTION ")
    print("3. MULTIPLICATION")
    print("4. DIVISION")
    print("5. SECOND POWER")
    print("6. SQUARE ROOT")
    print("7. EXIT")

def addition():
    a = float(input("Enter the first number: "))
    b = float(input("Enter the second number: "))
    return a + b

def subtraction():
    a = float(input("Enter the first number: "))
    b = float(input("Enter the second number: "))
    return a - b

def multiplication():
```

```
a = float(input("Enter the first number: "))
b = float(input("Enter the second number: "))
return a * b

def division():
    a = float(input("Enter the first number: "))
    b = float(input("Enter the second number: "))
    if b != 0:
        return a / b
    else:
        return "Error! Division by zero."

def second_power():
    a = float(input("Enter a number: "))
    return a ** 2

def square_root():
    a = float(input("Enter a number: "))
    if a >= 0:
        return math.sqrt(a)
    else:
        return "Error! Cannot take the square root of a negative number."

def calculator():
    while True:
        display_menu()
        choice = input("Choose an option (1-7): ")
        if choice == '1':
            print("Result:", addition())
        elif choice == '2':
            print("Result:", subtraction())
        elif choice == '3':
            print("Result:", multiplication())
        elif choice == '4':
            print("Result:", division())
        elif choice == '5':
            print("Result:", second_power())
        elif choice == '6':
            print("Result:", square_root())
        elif choice == '7':
            print("Exiting the calculator. Goodbye")
            break
        else:
            print("Invalid choice. Please try again.")

if __name__ == "__main__":
    calculator()
```

Basic Calculator Menu:

1. ADDITION
2. SUBTRACTION
3. MULTIPLICATION
4. DIVISION
5. SECOND POWER
6. SQUARE ROOT
7. EXIT

Result: 2.0

Basic Calculator Menu:

1. ADDITION
2. SUBTRACTION
3. MULTIPLICATION
4. DIVISION
5. SECOND POWER
6. SQUARE ROOT
7. EXIT

Result: 20.0

Basic Calculator Menu:

1. ADDITION
2. SUBTRACTION
3. MULTIPLICATION
4. DIVISION
5. SECOND POWER
6. SQUARE ROOT
7. EXIT

In []: