

## Python Assignment: "Basic Calculator with Error Handling"

### Code:

```
def add (a, b):
    return a + b

def subtract (a, b):
    return a - b

def multiply (a, b):
    return a * b

def divide (a, b):
    if b == 0:
        raise ZeroDivisionError ("Cannot divide by zero!")
    return a / b

def power(a, b):
    return a ** b

while True:
    print ("\n--- Basic Calculator ---")
    print ("1. Addition (+)")
    print ("2. Subtraction (-)")
    print ("3. Multiplication (*)")
    print ("4. Division (/)")
    print ("5. Power (^)")
    print ("6. Exit")
    choice = input("Enter your choice (1-6): ").strip()
    if choice == "6":
        print ("Exiting the calculator. Goodbye!")
        break
```

```
try:
    num1 = float(input("Enter the first number: "))
    num2 = float(input("Enter the second number: "))
    if choice == "1":
        print("Result:", add(num1, num2))
    elif choice == "2":
        print("Result:", subtract(num1, num2))
    elif choice == "3":
        print("Result:", multiply(num1, num2))
    elif choice == "4":
        print("Result:", divide(num1, num2))
    elif choice == "5":
        print("Result:", power(num1, num2))
    else:
        print("Invalid choice! Please select a valid option.")
except ValueError:
    print("Error: Please enter valid numeric values.")
except ZeroDivisionError as e:
    print("Error:", e)
```

## Output:

```
In [1]: %runfile 'C:/Users/Mritunjoy Paul/Desktop/Spyder ALL/Calculator.py' --wdir
--- Basic Calculator ---
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Power (^)
6. Exit

In [1]: Enter your choice (1-6): 1
Enter the first number: 77
Enter the second number: 4
Result: 81.0

--- Basic Calculator ---
1. Addition (+)
2. Subtraction (-)
3. Multinlication (*)
```