

ASSIGNMENT-4

<https://github.com/arnoldrnld/ustglob/tree/main/assignments>

Exception Handling (5 Coding Questions)

1. Write a Python program to handle a ZeroDivisionError.

```
try:  
    print(10/0)  
except ZeroDivisionError:  
    print(f"Error: You are dividing a number with zero !!!")
```

2. Write a program that accepts user input and handles a ValueError if the input is not an integer.

```
try:  
    num = int(input("enter a number: "))  
except ValueError:  
    print(f"Error: The input value is not an integer !!!")
```

3. Write a program to open a file and handle a FileNotFoundError.

```
try:  
    f = open("data.txt", "r")  
except FileNotFoundError:  
    print(f"Error: There is no such file or directory !!!")
```

4. Write a Python program that uses try, except, else, and finally blocks.

```
def div(a,b):  
    try:  
        result = a/b  
    except ZeroDivisionError:  
        print("Error: Cannot divide by zero!")  
    else:  
        print("Division done successfully!")  
        print(result)  
    finally:  
        print("Execution is complete!")
```

```
div(10,2)  
div(10,0)
```

5. Write a program to handle multiple exceptions in a single try block.

```
try:  
    a = int(input("Enter a number: "))  
    b = int(input("Enter another number: "))  
    result = a / b  
    print("Result:", result)  
  
except ValueError:  
    print("Please enter valid integers")  
except ZeroDivisionError:  
    print("Cannot divide by zero")
```

Text Files (5 Coding Questions)

1. Write a Python program to create a text file and write multiple lines into it.

```
file = open("sample.txt", "w")  
  
file.write("This is first line\n")  
file.write("This is second line\n")  
file.write("This is third line\n")  
  
file.close()
```

2. Write a program to read the contents of a text file line by line.

```
file = open("sample.txt", "r")  
  
for line in file:  
    print(line.strip())  
  
file.close()
```

3. Write a Python program to count the number of lines, words, and characters in a text file.

```
file = open("sample.txt", "r")  
  
lines = 0  
words = 0  
characters = 0
```

```
for line in file:  
    lines += 1  
    words += len(line.split())  
    characters += len(line)  
  
file.close()  
  
print("Lines:", lines)  
print("Words:", words)  
print("Characters:", characters)
```

4. Write a program to copy the contents of one text file into another file.

```
source = open("sample.txt", "r")  
destination = open("copy.txt", "w")
```

```
for line in source:  
    destination.write(line)  
  
source.close()  
destination.close()  
  
print("File copied successfully")
```

5. Write a Python program to search for a specific word in a text file and display the line numbers where it appears.

```
word = input("Enter the word to search: ")  
  
file = open("sample.txt", "r")  
  
line_number = 1  
  
for line in file:  
    if word in line:  
        print("Word found at line:", line_number)  
    line_number += 1  
  
file.close()
```