

## 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()
```