**Netaji Subhash Engineering College**

**Department of Computer Science & Engineering**

**B. Tech CSE 2nd Year 3rd Semester**

**2021-2022**

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**Name of the Course: IT Workshop**

**Course Code: PCC-CS393**

**Name of the Student: Sanjoy Saha**

**Class Roll No.: 3**

**University Roll No.: 10900120003**

**Date of Experiment: 7/01/2022**

**Date of Submission: 10/01/2022**

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* **Assignment No.: 51**

**Problem Statement:**   Write a program to read two numbers from the user and perform basic mathematical operations (addition, multiplication, subtraction, division) by handling all possible exceptions.

**Python Code:**

try:

    a, b = map(int, input('Enter two numbers: ').split())

    c = input('Enter a for addition, m for multiplication, s for subtraction , d for division : ')

    if c == 'a':

        print('Addition-', a+b)

    elif c == 'm':

        print('Multiplication-', a\*b)

    elif c == 's':

        print('Subtraction-', a-b)

    elif c == 'd':

        print('Division-', a/b)

except(TypeError, ZeroDivisionError, ArithmeticError, FloatingPointError, OverflowError, ValueError) as e:

    print('Errors handled-\n', e)

else:

    print('No error(s) found')

**Sample Output(s):**

**Text

Description automatically generated**

* **Assignment No.: 52**

**Problem Statement:** Write a program to read a number from the user and print its square. Generate Keyboard Interrupt exception if Ctrl + C is pressed instead of a number.

**Python Code:**

try:

    n=int(input("Enter the number: "))

    side=n\*n

    print("Square of %d is %d " %(n,side))

except KeyboardInterrupt as e:

    print("You press Ctrl+C")

    print("Enter a number next time")

**Sample Output(s):**

**Text

Description automatically generated**

* **Assignment No.: 53**

**Problem Statement:** Write a program to print random numbers infinitely. Raise the Stop Iteration exception after displaying 10 numbers to exit from the program.

**Python Code:**

def display(n):

    while True:

        try:

            n+=1

            if n==11:

                raise StopIteration

        except StopIteration:

            break

        else:

            print(n,end=" ")

i=0

display(i)

**Sample Output(s):**

**Text

Description automatically generated with medium confidence**

* **Assignment No.: 54**

**Problem Statement:**  Write a program to generate a random number. Raise a user-defined exception if the number is below 0.5.

**Python Code:**

import random

class randomError(Exception):

    def \_init\_(self,arg):

        self.msg=arg

try:

    number=random.random()

    if number<0.5:

        raise randomError("Random error is generated")

    print("Random number generated",number)

except randomError as e:

    print(e)

else:

    print("No exception")

finally:

    print("Bye")

**OUTPUT –**

**Text

Description automatically generated**

* **Assignment No.: 55**

**Problem Statement:** Write a program to read the age of a person and raise exceptions if age is negative.

**Python Code:**

try:

    age = int(input("Enter the age:"))

    if(age<0):

        raise ValueError

    else:

        print("the age is valid")

except ValueError:

    print("The age is not valid")

else:

    print("No exception")

**Sample Output(s):**

**Text

Description automatically generated**

**Assignment No.: 56**

**Problem Statement:**  Write a program to print each line of a file in reverse order.

**Python Code:**

def revline(x):

    i=0

    fileContents=len(open(x).readlines())

    line1=[None]\*fileContents

    f=open(x)

    while(i<fileContents):

        line1[i]=f.readline()

        line1[i]=line1[i].strip()

        print(line1[i][::-1])

        i=i+1

filename=input("Enter the file name : ")

revline(filename)

**Sample Output(s):**

**Text

Description automatically generated**

**Text

Description automatically generated**

**Assignment No.: 57**

**Problem Statement:**  Write a program to copy the content of the text file to another file by converting all lowercase characters to uppercase.

**Python Code:**

# To open the first file in read mode

f1 = open("first.txt", "r")

# To open the second file in write mode

f2 = open("second.txt", "w")

l = f1.readline()

while l:

    f2.write(l.upper())

    l = f1.readline()

f1.close()

f2.close()

**Sample Output(s):**

**Graphical user interface, application, Word

Description automatically generated**

**Assignment No.: 58**

**Problem Statement:**  Write a program to copy one Python script into another in such a way that all comment lines are skipped and not copied in the destination file.

**Python Code:**

# To open the first file in read mode

f = open("input.txt", "r")

# To open the second file in write mode

f1 = open("output.txt", "w")

l = f.readline()

while l:

    li = l.strip()

    if not li.startswith("#"):

         print (l.rstrip())

    l = f.readline()

    f1.write(l)

f.close()

f1.close()

**Sample Output(s):**

**Graphical user interface, application, Word

Description automatically generated**

**Text

Description automatically generated**

**Graphical user interface, application, Word

Description automatically generated**

**--------------------END-----------------**