Ex. No. : 11.1 **Date: 02.06.24**

Register No.: 231901015 **Name: JAYGANESH KANNAN**

EXCEPTION HANDLING

To find whether a digit lies in the specified range(1-100). Handling exceptions for invalid inputs and out-of-range numbers .

Input Format:

User inputs a number.

Output Format:

Confirm the input or print an error message if it's invalid or out of range.

Program:

```
try:
   a=input()
   if(int(a)>0 and int(a)<101):
      print("Valid input.")
   else:
      print("Error: Number out of allowed range")
except:
   print("Error: invalid literal for int()")
```

Ex. No. : 11.2 **Date: 02.06.24**

Register No.: 231901015 **Name JAYGANESH KANNAN**

EXCEPTION HANDLING

Write a Python program that performs division and modulo operations on two numbers provided by the user. Handle division by zero and non-numeric inputs.

Input Format:

Two lines of input, each containing a number.

Output Format:

Print the result of division and modulo operation, or an error message if an exception occurs.

Program:

```
try:
    a=input()
    b=input()
    c=int(a)/int(b)
    d=int(a)%int(b)
except ZeroDivisionError:
    print("Error: Cannot divide or modulo by zero.")
except:
    print("Error: Non-numeric input provided.")
else:
    print("Division result:",c)
    print("Modulo result:",d)
```

Ex. No. : 11.3 **Date: 02.06.24**

Register No.: 231901015 **Name: JAYGANESH KANNAN**

EXCEPTION HANDLING

Write a Python program that asks the user for their age and prints a message based on the age. Ensure that the program handles cases where the input is not a valid integer.

Input Format: A single line input representing the user's age.

Output Format: Print a message based on the age or an error if the input is invalid.

Program:

```
try:
   a=input()
   if int(a)>=0:
      print("You are",a,"years old.")
   else:
      print("Error: Please enter a valid age.")
except:
   print("Error: Please enter a valid age.")
```

Ex. No. : 11.4 **Date: 02.06.24**

Register No.: 231901015 **Name: JAYGANESH KANNAN**

EXCEPTION HANDLING

Develop a Python program that safely calculates the square root of a number provided by the user. Handle exceptions for negative inputs and non-numeric inputs.

Input Format:

User inputs a number.

Output Format:

Print the square root of the number or an error message if an exception occurs.

Program:

```
import math
try:
   n=input()
   n=float(n)
   if n < 0:
      print("Error: Cannot calculate the square root of a negative number.")
   else:
      r= math.sqrt(n)
      print("The square root of {} is {:.2f}".format(n, r))

except ValueError:
   print("Error: could not convert string to float")
```

Ex. No. : 11.5 **Date: 02.06.24**

Register No.: 231901015 **Name: JAYGANESH KANNAN**

EXCEPTION HANDLING

Develop a Python program that safely performs division between two numbers provided by the user. Handle exceptions like division by zero and non-numeric inputs.

Input Format: Two lines of input, each containing a number.

Output Format: Print the result of the division or an error message if an exception occurs.

Program:

```
try:
    a=input()
    b=input()
    c=float(a)/float(b)
except ZeroDivisionError:
    print("Error: Cannot divide or modulo by zero.")
except:
    print("Error: Non-numeric input provided.")
else:
    print(c)
```