# 11 – Exceptions

Ex. No.: 11.1 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

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.

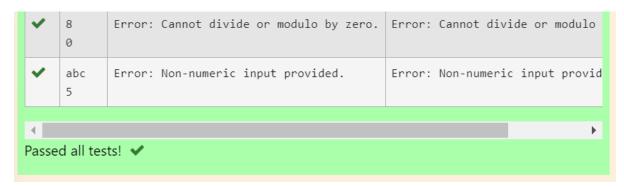
Output Format:

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

#### For example:

Input	Result
10 2	Division result: 5.0 Modulo result: 0
7	Division result: 2.333333333333333333333333333333333333
8	Error: Cannot divide or modulo by zero.

```
try:
        n = int(input())
 2
        m = int(input())
 3
4
        print("Division result:",n/m)
        print("Modulo result:",n%m)
 5
 6 v except ZeroDivisionError:
        print("Error: Cannot divide or modulo by zero.")
 7
 8 v except ValueError:
        print("Error: Non-numeric input provided.")
 9
10
```



Ex. No.: 11.2 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

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.

#### For example:

Input	Result
10	5.0
10	Error: Cannot divide or modulo by zero.
ten 5	Error: Non-numeric input provided.

```
1 try:
2    n = float(input())
3    m = float(input())
4    print(n/m)
5 v except ZeroDivisionError:
6    print("Error: Cannot divide or modulo by zero.")
7 v except ValueError:
8    print("Error: Non-numeric input provided.")
9
```

	Input	Expected	Got
~	10 2	5.0	5.0
~	10 0	Error: Cannot divide or modulo by zero.	Error: Cannot divide or mo
~	ten 5	Error: Non-numeric input provided.	Error: Non-numeric input p
1			
Passed all tests! ✓			

Ex. No.: 11.3 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

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.

### For example:

Input	Result
twenty	Error: Please enter a valid age.
25	You are 25 years old.
-1	Error: Please enter a valid age.

Answer: (penalty regime: 0 %)

	Input	Expected	Got	
<b>~</b>	twenty	Error: Please enter a valid age.	Error: Please enter a valid age.	~
<b>~</b>	25	You are 25 years old.	You are 25 years old.	~
~	-1	Error: Please enter a valid age.	Error: Please enter a valid age.	~
<b>~</b>	150	You are 150 years old.	You are 150 years old.	~
_		Error: Please enter a valid age.	Error: Please enter a valid age.	~

Ex. No.: 11.4 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

Write a Python script that asks the user to enter a number within a specified range (e.g., 1 to 100). Handle 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.

### For example:

Input	Result
1	Valid input.
101	Error: Number out of allowed range
rec	Error: invalid literal for int()

**Answer:** (penalty regime: 0 %)

```
1 v try:
2    n = int(input())
3 v    if(n>100 or n<1):
4         print("Error: Number out of allowed range")
5 v    else:
6         print("Valid input.")
7 v except:
8     print("Error: invalid literal for int()")</pre>
```

	Input	Expected	Got
<b>~</b>	1	Valid input.	Valid input.
<b>~</b>	100	Valid input.	Valid input.
_	101	Error: Number out of allowed range	Error: Number out of allowed range

Ex. No.: 11.5 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

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.

### For example:

Input	Result
16	The square root of 16.0 is 4.00
-4	Error: Cannot calculate the square root of a negative number.
rec	Error: could not convert string to float

Answer: (penalty regime: 0 %)

