

QH/9/25 Task 9:- Implement Exceptions and Exceptional Handling in Python:-

(a) Student Marks validation.

Aim:- To write a python program that validates student marks and handles exceptions if the marks are invalid.

Algorithm:-

1. Start the program.
2. ACCEPT marks input from the user.
3. Convert the input into an integer.
4. check if marks are less than 0 or greater than 100.
5. If so, raise an exception with an appropriate message.
6. USE try-except to catch and display the error message.
7. Invalid, display the marks entered.
8. End the program.

Program:-

student marks validation.

try:

marks = int(input("Enter student marks:"))

if marks < 0 or marks > 100:

raise ValueError("Marks must be between 0 and 100").

print("Valid Marks:", marks)

except ValueError as e:

print("Error:", e).

INPUT:-

Enter student marks: 120.

6 250

Output:-

Output:-
Error: Marks, must be between 0 and 100.

~~Result:- The program successfully validates student
marks and displays an error message for
invalid input.~~

Input 1:-

Enter numerator: 10

Enter denominator: 0

Output 1:-

Error: Division by zero is not allowed.

(b). Division calculator with exception Handling.

Aim:- To write a Python program that performs division of two numbers, and handles exceptions like division by zero and invalid input.

Algorithm:-

1. Start the program
2. use a try block to take two numbers as input.
3. convert the inputs into float or int.
4. perform division and display the result.
5. use except to handle:
 - Zero Division Error if denominator is zero.
 - Value Error if the input is not a valid number.

Program:-

Division calculator with exception handling Ex:

```
num 1 = float(input ("Enter numerator:"))
```

```
num 2 = float(input ("Enter denominator:"))
```

```
result = num 1 / num 2
```

```
print ("Result:", result)
```

except zero Division Errors:

```
print ("Error: Division by zero is not allowed.")
```

except value Errors:

```
print ("Error: Invalid input! Please enter  
numeric values only.")
```

Input 2:-

Enter numerator: ten

Enter denominator: 2

Output 2:-

Error: Invalid input: Please enter numeric values
Only.

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Result:-

The program correctly performs division
And handles both invalid and division-by-zero.

Errors:-

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