

Date: 11/9/25

Task-9: Implement exceptions and exceptional handling in python

Aim: To implement exceptions and exceptional handling in python

Algorithm:

1. Start the program
2. Initializes a list of grades (e.g., [85, 90, 78, 92, 88])
3. Prompts the user to enter the index of the grade they wish to view
4. Attempts to display the grade at the specified index
5. If the index is out of range, catches the IndexError and prints an error message, "Invalid index please enter valid index."

Program:

```
grades = [85, 90, 78, 92, 88]
print("Grades list: ", grades)
grade they want to view
try:
    index = int(input("Enter the index of the grade you
        want to view:"))
    print(f"The grade at index {index} is: {grades[index]}")
except IndexError:
    print("Invalid index. Please enter a valid index!")
except ValueError:
    print("Invalid input. Please enter a numerical index.")
```

Problem 9.2: - You are developing a python calculator program that performs basic arithmetic operations. One of key functionalities is to divide two numbers. This would cause program to crash if not handled properly.

Algorithm:

1. Start the program

2. Prompt the user to enter two no! a numerator & denominator

4. if the denominator is zero, catch the zero division error, display an error message: "Error division by zero is not allowed." program:

```
def divide_numbers():
    try:
        numerator = float(input("Enter the numerator:"))
        denominator = float(input("Enter the denominator:"))
        result = numerator / denominator
        print(f"Result: {result}")
    except ZeroDivisionError:
        print("Error: Division by zero is not allowed")
    except ValueError:
        # Handle invalid input float is not a number
        print("Error: Please enter valid numbers.")
    # Call function to execute the division operation
divide_numbers()
```

problem Q.3:- you are building a python application to determine if a person is eligible to vote based on their age. According to the rules, only individuals who are 18 years or older are allowed to vote. To enforce this rule, you decide to create an age below 18 is entered.

Algorithm:

1. Define the custom exception
2. Prompt the user for input
3. Check if the age is below 18
4. Raise an exception if condition is met.
5. Handle the exception with a custom error message.

Program:

```
# define python user-defined exceptions
class InvalidAgeException(Exception):
    "Raised when the input value is less than 18"
# you need to guess this number
number = 18
try:
    input_num = int(input("Enter a number:"))
    if input_num < number:
```

output

entered the numerator: 10
entered the denominator: 0
ERROR!

error: division by zero is not allowed.

[83, 27, 37, 08, 02] = 1000

(above "tell address")
and of two 891 0000
'US)

point("Eligible to vote")
exception invalid Age exception:
point ("Exception occurred: invalid Age")



result: Thus the program for implement Exceptions
and exceptional handling is executed
and verified successfully

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EX-140	op
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	20
TOTAL (20)	8
SIGN WITH DATE	25/10