

## Task-9 Implement Exception & Exceptional handling in python.

Aim: To implement exceptions & exceptional handling in python.

Algorithm:

1. Start the program.
2. Initializes a list of grades [85, 90, 78, 92, 88]
3. prompt the user to enter index of grade wish to view.
4. Attempts to display the grade of the specified index.
5. If the Index is out of range, catches the Index Error and print an error message.

Program:

```
# initialize the list of grades.
```

```
grades = [85, 90, 78, 92, 88]
```

```
# Display the grades list
```

```
print("Grades list:", grades)
```

```
# prompt the user to enter the index of grades want to try:
```

```
index = int(input("Enter the index of the grade you"))
```

```
# Attempt to display the grade at specified index  
print(f"the grade of index is {grades[index]}")  
except IndexError:
```

```
# Handle the case where the index is out of range  
print("Invalid range. please enter a valid index")  
except ValueError:
```

```
# Handle the case where input is not an integer  
print("Invalid input please enter a numerical Index")
```

Result: Thus, the program in python implement exceptions and exceptional handling is executed and verified successfully.



print (choice)  
print (collection)

Output:-

Grades list: [85, 90, 78, 92, 88]

Enter the index of the grades you  
want view: 10

Invalid index. please enter a valid index

VEL TECH - CSE	
EX NO.	2
PERFORMANCE (%)	2
RESULT AND MARKS (%)	0
VIVA VOCE (%)	2
RECORD (%)	4
TOTAL (%)	
SIGN WITH DATE	

Result: This the python program to implement  
python generator and decorator was  
successfully executed & output was  
verified.



## Task : 9.2

Aim: - to develop a python calculator program that performs basic arithmetic operations.

Algorithm:

1. Start the program
2. prompts the user to enter two number a numerator and a denominator
3. Attempt to divide the numerator by the denominator.
4. If the denominator is zero catches the zero division error and display an error message: "Error: Division by zero is not allowed."

Program:

```
#function to perform division
```

```
def divide-numbers():
```

```
try:
```

```
    #prompt the user to enter the numerator
```

```
    numerator = float(input("Enter the numerator:"))
```

```
    # prompt the user to enter the denominator
```

```
    denominator = float(input("Enter the denominator"))
```

```
# Attempt to perform division
```

```
    result = numerator/denominator
```

```
    print(f"Result: {result}")
```

```
except zero division error
```

```
# Handle division by zero error.
```

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



Output:

Enter the numerator = 10

Enter the denominator = 0

Error!

Error! Division by zero is not allowed.

Output:

Grades list: (85, 90, 78, 92, 88)

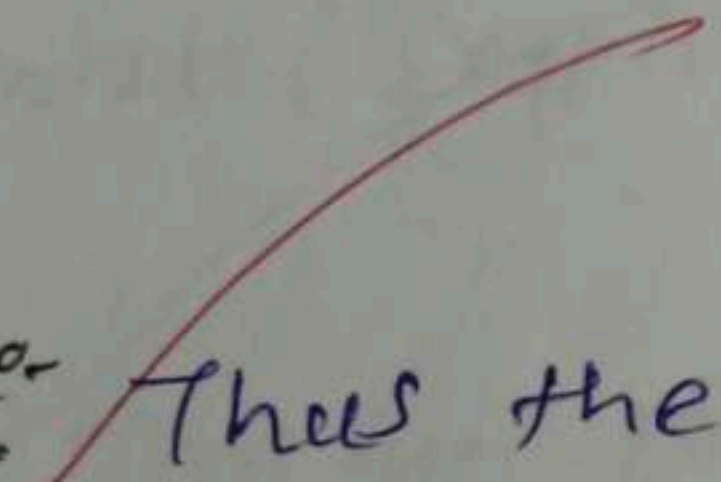
Enter the index of the grade you want  
to view: 10

Invalid Error! please enter a valid index.



except value error:

```
# Handle invalid input that is not a number  
print("Error: please enter valid numbers.")  
# Call the function to execute the division  
operation divide-number()
```

Result:  Thus the program of Python Calculator has been executed successfully.



## Task: 9.3

Aim: to implement exception and exceptional handling to determine if a person is eligible to vote.

Algorithm:

1. Define the custom exception
2. prompt the user for input
3. check if the age is below 18.
4. Raise an exception of the custom error message.

Program:

```
# define python user-defined exception  
class Invalid AgeException(Exception):
```

```
    "Raised which the input value is less than 18"  
    pass
```

```
    "you need to guess this number."
```

```
    number = 18
```

```
try:
```

```
    input-num = int(input("Enter a number:"))
```

```
    if input-num < number
```

```
        raise Invalid AgeException
```

```
    else
```

```
        print("eligible to vote")
```

```
except Invalid age exception:
```

```
    print("Exception occurred Invalid age")
```

Result: Thus the program for implement exception and exceptional handling is executed and verified successfully.

VEL TECH - CSE	
EX NO	9
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
GRAND TOTAL (8)	3+5=8
RECORD (4)	
TOTAL (15)	
SIGNATURE DATE	15



except value error:  
all handle invalid input that is not a number  
print ("error: please enter valid number")  
all call the function to ensure the division  
operation divide-number()

Output"

Enter a number : 15

exception occurred! invalid age.

Result: Thus the program of python  
calculator has been executed  
successfully.