Task-9. Implement Exception and Exceptional in Python

Aim: To implement exceptions and exceptional handling in Python

Algorithm:

1. start the Program
2. Initialize a list of grades (eg [85,90,78,92,88]
3. Prompts the user to enter the index of grade wish to view
4. Attempts to display to grade at the specified index
5. If the index is out of range catches the Index Error and Print an error message Invalid index Please enter a valid index

Program

```
# Initialize the list of grades
grade =[85,90,78,92,88]
# Display the grades list
Print ("Grades List:", grades)
# Prompt the user to enter the index
  of the grade they want to view
try:
   index =int(input ("Enter the index of the
grade you want to view:"))
# Attempt to display the grade at the specified
  index
```

output

```
Grades lists:[85,90,78,92,88]
Enter the k index of the grades you wat
    view :40
Invalid index:Please enter a valid index.
```

```
Print (f" The grade at index {index} is:{grade
  [index]}")
except Index Error
   # Handle the case where the index is out of
      range
   Print ("Invalid index Please enter a valid index").
  except value error
   # Handle the case where the input is out
      an integer
  Print ("Invalid input Please enter a numerical
       index):
```

Result: The the c. Program in Python implement Exceptions and exceptional handling in executed and verified successfully.

Task-9.2

Aim: To develop a Python calculator Program that Perform basic arithmatic operation

Algorithm:

1. Start the Program
2. Promts 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}")
```

output

```
Enter the numeration :10
Enter the denominator =80

 ERROR :

Error : Division by zero is not allowed
```

```
except zero division error
  # Handle division by zero error
 Print ("Error: Division by zero is not allowed.")
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 c. Program develop a Python calculator Program that is executed and verified successfully

Task-9.3

Aim: To Exceptional handle exceptions

To build a Python application to determine

Algorithm:

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

Program:

```
# define Python user-defined exeception
class Invalid Age Exception (Exception):
  "Raised when 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 Age Execaption
   else
    Print f("Eligible to vote')
   except Invalid age Exception
```

outPut

```
Enter a number :15
 ExcePtion occured : Invalid Age
```

Print ("Exception occured : Invalid Age")

VEL TECH - CSE	
EX NO.	9
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	
SIGN WITH DATE	15

Result:

Thus the Program for Implement exceptio and Exceptional handling is executed and verified successfully.