

## Task-9

Implement Exception and exceptional handling in python

Aim: To implement Exception and Exceptional handling in python

Q.1. You are developing a python program that process a list of students grades. The program to allow the user to select a grade by specifying an index number.

Algorithm:

1. start
2. initializes a list of grades
3. Prompts the user to enter the index of the grade they wish to view
4. If the index is out of range, catches the index Error and prints an Error message "Invalid Error index. Please Enter valid index."

Program

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

```
print ("Grades List:" grades)
```

```
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 err index. Please Enter valid index.")
```

```
except ValueError
```

```
    print("invalid input. Please Enter numerical index.")
```

output

grades list [85, 90, 78, 92, 88]

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

In valid index. please Enter valid index.



9.2 You are developing a python calculator program that performs basic arithmetic operations. one of the key functionalities is to divide two numbers entered by the user.

Algorithm:

1. Start
2. Prompts the user to enter two numbers: a numerator and a denominator
3. Attempts to divide the numerator by denominator
4. if the denominator is zero, catches the zero division error and Displays 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:
```

```
        print("Error: Please Enter valid numbers.")
```

```
divide_numbers()
```

```
divide_numbers()
```



grilled lamb chops served to me by a waiter

output

Enter the numerator: 10

Enter the denominator: 0

Error: Division by zero is not allowed.



9.3 You are building a python application to determine if a person is eligible to vote based on their age. According to the rules, only individual who are 18 years or older are allowed to vote.

algorithm:

1. Define the custom Exception
2. prompt the user
3. check if the age is below 18
4. Raise an exception if the condition is met.
5. Handle the exception

Program:

```
class Invalid Age Exception(Exception):  
    "Raised when the input value is less than 18"
```

```
    Pass  
    number = 18
```

```
try  
    input_num = int(input("Enter a number:"))  
    if input_num < number:  
        raise Invalid Age Exception
```

```
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.

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RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
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