

Task 9:- Implement exceptions and exceptional handling.
 Aim:- To implement exceptions and exceptional handling in python.

Algorithm:-

1. starts 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 a 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 ("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")
```

Q.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

Output:-

Grades list: [85, 90, 78, 92, 88]
Enter the index of the grade you want to view:
Enter valid index. please enter a valid index.

DEPARTMENT	STUDENT ID	NAME	GRADE
EE	101	John Doe	85
EE	102	Jane Smith	90
EE	103	Mike Johnson	78
EE	104	Sarah Williams	92
EE	105	Alex Green	88
EE	106	David Brown	85
EE	107	Emily Davis	90
EE	108	Olivia Wilson	78
EE	109	William Miller	92
EE	110	Charlotte Clark	88

DEPARTMENT	STUDENT ID	NAME	GRADE
EE	101	John Doe	85
EE	102	Jane Smith	90
EE	103	Mike Johnson	78
EE	104	Sarah Williams	92
EE	105	Alex Green	88
EE	106	David Brown	85
EE	107	Emily Davis	90
EE	108	Olivia Wilson	78
EE	109	William Miller	92
EE	110	Charlotte Clark	88

function handles all of the above tasks, such as
deleting student info, adding new student info, and so on.
The function also handles errors and returns
appropriate messages if any error occurs.

Task 9:

Algorithm

1. Σ 21

2. prob

3. a

4. End

P

Pro

Try

End

- and a denominator.
- 3. Attempts to divide the numerator by the denominator.
 - 4. If the denominator is zero, catches the ZeroDivisionError 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()

Q.2 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.

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 the condition is met
5. Handle the exception with a custom error message.

Output

Enter the numerator : 10

Enter the denominator : 0

ERROR! Division by zero is not allowed.

Error: Division by zero is not allowed.

and d
3. Attempt
4. If the
and di
error

Program
def di
en

divide
9.3
if
return
old

1

Output :-

- Enter a number > 15

exception occurred: Invalid Age.

: (22 random numbers)

(10 random numbers) - 100% = random numbers

(10 random numbers) + 100% = random numbers

(10 random numbers) * 100% = random numbers

(10 random numbers) / 100%

(10 random numbers) % 100% = random numbers

(10 random numbers) - 100% = random numbers

3 random numbers = random numbers

100% - 100% = random numbers

100% + 100% = random numbers

100% * 100% = random numbers

100% / 100% = random numbers

random numbers = random numbers

Program:-

class InvalidAgeException (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 InvalidAgeException

else:

print ("eligible to vote")

except InvalidAgeException:

print ("exception occurred : invalid age")

VEL TECH	
EX No.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (5)	
VIVA VOCE (5)	
RECORD (1)	
TOTAL (20)	
SIGN WITH DATE	

Result:- Thus, the program for implement exceptions and exceptional handling is reviewed and verified successfully.