Exception Handling construct

We will learn how to handle exception in python.

syntax:

```
1)— — —
2)— — —
3)— — —
Try
4)— —-
5)— —-
6)— —-
Except:
7)— —-
8)— —-
9)— — —
10)— —-
```

- This may cause Exception . So the lines which may cause Exception are written inside the block.

- Inside except we may print the message about the exception.

- The program starts running from the first line then continue 2,3,4,5,6 then it will not go to line 7 as there is no error.

   What happens if there is no error?

- First line , second line gets executed then third fourth . Suppose there is an error in 5t line.The exception raised in 5th line then it will not execute in 6th line.

- It will directly jump to 7th line I.e except block.

- If there is any exception in try block then it will execute except block. If condition gets in 4th , 5th and ,6th will not execute and remaining 8910 execute properly.

- The programme executes successfully it will not get terminated or crash abruptly it gets terminated gracefully

- If suppose try and accept has not been used.

- If there is an exception. In the 4th line . The program will crash

Program

Input

```
L=[10, 20, 30, 40, 50]#list of 5 elements
index=int(input('enter index'))#taking input as index
print(L[index])#printing the element at given each given index
print('terminated gracefully')#message
```

Output:enter index3
 40
terminated gracefully

enter index9
Traceback (most recent call last):
 File "/Users/abdulbari/PycharmProjects/pythonProject/python programs.py", line 3, in <module>
   print(L[index])#printing the element at given each given index
IndexError: list index out of range
If the index is out of range it will get an exception error i.e index error
If we give an invalid index it will raise an exception

Program 2:
Input

```
L=[10, 20, 30, 40, 50]#list of 5 elements
try:
  index=int(input('enter index'))#taking input as index
  print(L[index])#printing the element at given each given index
except:
  print('invalid index')
print('terminated gracefully')#message
```

Output 1:

enter index3
40
terminated gracefully

Output2:

enter index9
invalid index
terminated gracefully

Now the program does not crash it executes safely.