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EXCEPTION HANDLING IN PYTHON

1. • Exception
Exception is an abnormal condition in a program

Syntax :
try :
your main code
except Exception_name1 :
code or you can print your own error message here

except Exception_name2 :
code or you can print your own error message here
else :
if there is no exception then execute is block

Eg
```
try :
    a = int (input ("Enter 1st No. = "))
    b = int (input ("Enter 2nd No. = "))
    c = a / b
    print (c)

except ValueError :
    print ("Error ! plase input No. only ")
else :
    Print ("Thank you...")
```

→ (Custom message)

O/P
Enter 1st No = 9
Enter 2nd No. = 3
3
Thank you...

OR

O/P
Enter 1st No. 9
Enter 2nd No. = a
Error ! Plase input No. only

Arithmatic error

If we divide any No. by Zero

Eg
```
try :
    a = int ( input ( " Enter Ist No. " ) )
    b = int ( input ( " Enter IInd No. " )
    c = a/b
    print (c)
except ArithmeticError :
    print ( " Error ! divide by zero is not allowed " )
else :
    print ( " Thankyou ... " )
```

O/P
Enter Ist no. = 5
" IInd " = 0
Error ! divide by zero is not allowed

O/P
Enter Ist No. 5
" IInd No. = 5
Thankyou...

Eg
```
try :
    Saving = 20000
    withdrawal = 30000
    if withdrawal > Saving :
        raise Exception ()
    else : cash = saving - withdrawal
except Exception :
    print ( " Not Enough Balance " )
else :
    print ( withdrawal, " has been debited " )
    print ( " The available balance is : ", cash )
```

O/P
10000 has been debited
Available balance is, 10000

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⇒ Debugging In Python

* Debugging is a process of finding & resolving defects or problems within a computer program that prevents correct operation of computer software or a system

⇒ why debugging

1. our program is not running & causing unexpected errors
2. Our program is working fine but not working the same way we want

steps for debugging
1. Set trace
2. Execute code line by line

→ Execute code line by line

In this method one line of program is checked & other line are comment out then Next line is checked & other line are comment out

```
# a = 5
b = 6
# c = a+b
# Print (c)
```

Checking → This line

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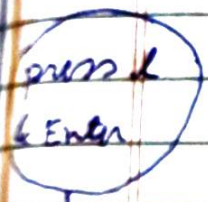
Trace method [Python debugger]

Import pdb

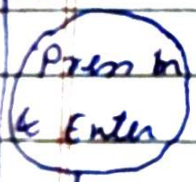
```
pdb.set_trace()
name = input ("Please enter name")
age = input ("Please type age")
print : (Name)
age2 = int(age) + 5
print (age2)
```

O/p

```
name = input ('Please type your name:')
(pdb) l
```



Pdb n



→ It will execute the previous correct line

→ It will show the position where the program stops

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Command
- l → is used for moving in the code
- h → is used for execution of l positi

In this way we can find error in the code

→ c command : [continue command]

This is used for executing the whole program rather than line by line

→ q command

This is used for quit the program

pdb.set_trace() can be used any where in the program according to the common sense of the debugger user