Netsted try - except

- One try block can have multiple except block
- Nested try - except is also possible in try block
- Some combinations of nested try - except are

```
try :
    .......
    .......
try :
    ......
    ......
except :
    ......
    ......
except :
    ......
    ......
```

```
try :
    .....
    .....
    try :
        .....
        .....
    except :
        ........
        ........
    except :
        ........
        ........
    try :
        .......
        .......
    except :
        ......
        ......
```

```
try :
    try :
        try :
        except :
    except :
except :
```

Q) A program to divide 2 numbers .

In this program there is a chance that we might get an error when the user is giving input , when the numbers are divided so , we place this risky code in try blocks and if the error actually occurred it should be handled by the particular except block in the program.

```python
try:
    a = int(input('enter first number : '))  # placing the risky code in try
    try:
        b = int(input('enter second number : '))  # placing the risky code in try
        try:      # placing the risky code in try
            c = a // b
            print(c)

        except ZeroDivisionError as e:  # if a number is / by zero this raise an exception for 3rd try block
            print(e)

    except ValueError:  # if the user gives different values as I/P this raise an exception for 2nd try block
        print('value error inner')

except ValueError:  # if the user gives different values as I/P this raise an exception for 1st try block
    print('value error outer')
```

```
enter first number : 10
enter second number : 5
2
```
output when correct input is given

```
enter first number : 10
enter second number : abc
value error inner
```
output when incorrect value is given exception is raised

```
enter first number : 10
enter second number : 0
integer division or modulo by zero
```
output when zero is divided by an integer value exception is raised

- It is suggested to use multiple try block instead of nested try except (its completely optional and upto you)
- The same program can be written using multiple except block to a single try block as shown in below

```
try:
    a = int(input('enter first number : '))
    b = int(input('enter second number : '))
    c = a // b
    print(c)

except ZeroDivisionError as e:
    print(e)

except ValueError:
    print('value error outer')
```

using multiple except block in a single try

```
enter first number : 10
enter second number : 5
2
```

output when correct input is given

```
enter first number : 10
enter second number : abc
value error inner
```

output when incorrect value is given exception is raised

```
enter first number : 10
enter second number : 0
integer division or modulo by zero
```

output when zero is divided by an integer value exception is raised