EXCEPTION HANDLING

In [3]:
```
num1 = int(input("Please enter the first number: "))
num2 = int(input("Please enter the second number: "))
result = num1 / num2
print (f"So {num1} / {num2} = {result}...")
print ("End of the program...")
```

```
So 100 / 40 = 2.5...
End of the program...
```

In [4]:
```
num1 = int(input("Please enter the first number: "))
num2 = int(input("Please enter the second number: "))
result = num1 / num2
print (f"So {num1} / {num2} = {result}...")
print ("End of the program...")
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
<ipython-input-4-5dddedadebb0> in <module>
      1 num1 = int(input("Please enter the first number: "))
      2 num2 = int(input("Please enter the second number: "))
----> 3 result = num1 / num2
      4 print (f"So {num1} / {num2} = {result}...")
      5 print ("End of the program...")

ZeroDivisionError: division by zero
```

In [7]:
```
try:
    num1 = int(input("Please enter the first number: "))
    num2 = int(input("Please enter the second number: "))
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except ZeroDivisionError as zde:
    print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
    print ("ZeroDivisionError: Error message:", zde)
print ("End of the program...")
```

```
ZeroDivisionError: Division by ZERO is Illegal..!!!
ZeroDivisionError: Error message: division by zero
End of the program...
```

In [8]:
```
try:
    num1 = int(input("Please enter the first number: "))
    num2 = int(input("Please enter the second number: "))
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except ZeroDivisionError as zde:
    print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
    print ("ZeroDivisionError: Error message:", zde)
print ("End of the program...")
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-8-3e10182c1407> in <module>
      1 try:
      2     num1 = int(input("Please enter the first number: "))
----> 3     num2 = int(input("Please enter the second number: "))
      4     result = num1 / num2
      5     print (f"So {num1} / {num2} = {result}...")

ValueError: invalid literal for int() with base 10: 'two'
```

In [9]:
```
try:
    num1 = int(input("Please enter the first number: "))
    num2 = int(input("Please enter the second number: "))
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except ZeroDivisionError as zde:
    print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
    print ("ZeroDivisionError: Error message:", zde)
except ValueError as ve:
    print ("ValueError: Please give only Integer Values..!!!")
    print ("ValueError: Error message:", ve)
print ("End of the program...")
```

```
ValueError: Please give only Integer Values..!!!
```

```
ValueError: Error message: invalid literal for int() with base 10: 'two'
End of the program...
```

In [22]:

```
try:
    num1 = int(input("Please enter the first number: "))
    num2 = int(input("Please enter the second number: "))
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except ValueError as ve:
    print ("ValueError: Please give only Integer Values..!!!")
    print ("ValueError: Error message:", ve)
    print ("ValueError: Type of exception:", type(ve))
# except ZeroDivisionError as zde:
#     print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
#     print ("ZeroDivisionError: Error message:", zde)
#     print ("ZeroDivisionError: Type of exception:", type(zde))
except Exception as ex:
    print ("Exception: Some other exception has been raised..!!!")
    print ("Exception: Error message:", ex)
    print ("Exception: Type of exception:", type(ex))

print ("End of the program...")
```

```
Exception: Some other exception has been raised..!!!
Exception: Error message: division by zero
Exception: Type of exception: <class 'ZeroDivisionError'>
End of the program...
```

In [24]:

```
try:
    num1 = int(input("Please enter the first number: "))
    num2 = int(input("Please enter the second number: "))
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except Exception as ex:
    print ("Exception: Some other exception has been raised..!!!")
    print ("Exception: Error message:", ex)
    print ("Exception: Type of exception:", type(ex))
except ValueError as ve:
    print ("ValueError: Please give only Integer Values..!!!")
    print ("ValueError: Error message:", ve)
    print ("ValueError: Type of exception:", type(ve))
except ZeroDivisionError as zde:
    print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
    print ("ZeroDivisionError: Error message:", zde)
    print ("ZeroDivisionError: Type of exception:", type(zde))

print ("End of the program...")
```

```
Exception: Some other exception has been raised..!!!
Exception: Error message: invalid literal for int() with base 10: '100.5'
Exception: Type of exception: <class 'ValueError'>
End of the program...
```

In [28]:

```
try:
    num1 = int(input("Please enter the first number: "))
    num2 = int(input("Please enter the second number: "))
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except ValueError as ve:
    print ("ValueError: Please give only Integer Values..!!!")
    print ("ValueError: Error message:", ve)
    print ("ValueError: Type of exception:", type(ve))
except ZeroDivisionError as zde:
    print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
    print ("ZeroDivisionError: Error message:", zde)
    print ("ZeroDivisionError: Type of exception:", type(zde))
except Exception as ex:
    print ("Exception: Some other exception has been raised..!!!")
    print ("Exception: Error message:", ex)
    print ("Exception: Type of exception:", type(ex))
else:
    print ("Else: Else block is executing...")
    print ("Else: Had a smooth execution...")
finally:
    print ("Finally: Finally block is executing...")
    print ("Finally: This block executes always...")

print ("End of the program...")
```

```
ZeroDivisionError: Division by ZERO is Illegal..!!!
ZeroDivisionError: Error message: division by zero
```

```
ZeroDivisionError: Type of exception: <class 'ZeroDivisionError'>
Finally: Finally block is executing...
Finally: This block executes always...
End of the program...
```

In [31]:

```python
try:
    num1 = int(input("Please enter the first number (between -100 to +100): "))
    num2 = int(input("Please enter the second number (between -100 to +100): "))
    if (num1 < -100 or num2 < -100):
        raise NameError("Below-100")
    if (num1 > 100 or num2 > 100):
        raise NameError("Above100")
    result = num1 / num2
    print (f"So {num1} / {num2} = {result}...")
except NameError as ne:
    print ("NameError: Input value out of range...")
    if (str(ne) == "Below-100"):
        print ("NameError: Input value was below -100...!!!")
    if (str(ne) == "Above100"):
        print ("NameError: Input value was above 100...!!!")
except ValueError as ve:
    print ("ValueError: Please give only Integer Values..!!!")
    print ("ValueError: Error message:", ve)
    print ("ValueError: Type of exception:", type(ve))
except ZeroDivisionError as zde:
    print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
    print ("ZeroDivisionError: Error message:", zde)
    print ("ZeroDivisionError: Type of exception:", type(zde))
except Exception as ex:
    print ("Exception: Some other exception has been raised..!!!")
    print ("Exception: Error message:", ex)
    print ("Exception: Type of exception:", type(ex))
else:
    print ("Else: Else block is executing...")
    print ("Else: Had a smooth execution...")
finally:
    print ("Finally: Finally block is executing...")
    print ("Finally: This block executes always...")

print ("End of the program...")
```

```
NameError: Input value out of range...
NameError: Input value was below -100...!!!
Finally: Finally block is executing...
Finally: This block executes always...
End of the program...
```

In [ ]:

```python
# Class Assignment-1:
# -------------------
# Rewrite the code in such a way that until we can perform division operation successfull with valid user
# input numbers, the program will keep on asking both two new input numbers for the user.
# Solve this assignment.
```

In [32]:

```python
print ("Hello")
```

```
Hello
```

In [2]:

```python
while True:
    try:
        num1 = int(input("Please enter the first number (between -100 to +100): "))
        num2 = int(input("Please enter the second number (between -100 to +100): "))
        if (num1 < -100 or num2 < -100):
            raise NameError("Below-100")
        if (num1 > 100 or num2 > 100):
            raise NameError("Above100")
        result = num1 / num2
        print (f"So {num1} / {num2} = {result}...")
    except NameError as ne:
        print ("NameError: Input value out of range...")
        if (str(ne) == "Below-100"):
            print ("NameError: Input value was below -100...!!!")
        if (str(ne) == "Above100"):
            print ("NameError: Input value was above 100...!!!")
    except ValueError as ve:
        print ("ValueError: Please give only Integer Values..!!!")
        print ("ValueError: Error message:", ve)
        print ("ValueError: Type of exception:", type(ve))
    except ZeroDivisionError as zde:
        print ("ZeroDivisionError: Division by ZERO is Illegal..!!!")
        print ("ZeroDivisionError: Error message:", zde)
        print ("ZeroDivisionError: Type of exception:", type(zde))
```

```
    except Exception as ex:
        print ("Exception: Some other exception has been raised..!!!")
        print ("Exception: Error message:", ex)
        print ("Exception: Type of exception:", type(ex))
    else:
        print ("Else: Else block is executing...")
        print ("Else: Had a smooth execution...")
        break
    finally:
        print ("Finally: Finally block is executing...")
        print ("Finally: This block executes always...")

print ("End of the program...")
```

```
NameError: Input value out of range...
NameError: Input value was above 100...!!!
Finally: Finally block is executing...
Finally: This block executes always...

ZeroDivisionError: Division by ZERO is Illegal..!!!
ZeroDivisionError: Error message: division by zero
ZeroDivisionError: Type of exception: <class 'ZeroDivisionError'>
Finally: Finally block is executing...
Finally: This block executes always...

So 60 / 15 = 4.0...
Else: Else block is executing...
Else: Had a smooth execution...
Finally: Finally block is executing...
Finally: This block executes always...
End of the program...
```

In [1]:

```
5.0 is divison of two numbers
```

In [ ]:

In [ ]:

In [ ]:

In [ ]: