In [206]:
```
import sys
import operator
import math
```

importing Libraries

In [200]:
```
a = 0
print(a)
```

```
0
```

In [204]:
```
b = 1
print(b)
```

```
1
```

assignment of values

In [205]:
```
c = a + b
```

trying to print by using print function, however, hangup in error"ZeroDivisionError"

In [28]:
```
print(b/a)
print(a-b)
print(a+b)
print(a*b)
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
Cell In[28], line 1
----> 1 print(b/a)
      2 print(a-b)
      3 print(a+b)

ZeroDivisionError: division by zero
```

In [29]:
```
print(b/a)
print(a-b)
print(a+b)
print(a*b)
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
Cell In[29], line 1
----> 1 print(b/a)
      2 print(a-b)
      3 print(a+b)

ZeroDivisionError: division by zero
```

trying to improvise code by using try, except and finally keyword which is called exception handling in python.

In [212]:
```
try:
    print(b/a)
except:
    print('Zero Division error buddy')
finally:
    print(a-b)
    print(a+b)
    print(a*b)
```

```
Zero Division error buddy
-1
1
0
```

In [39]:
```
try:
    print(b/a)
except:
    print('Zero Division error buddy')
#     print(a-b)
#     print(a+b)
#     print(a*b)
```

```
Zero Division error buddy
```

In [207]:
```
try:
    print(b/a)
except:
    print('Zero Division error buddy')
    print(a-b)
    print(a+b)
    print(a*b)
```

```
Zero Division error buddy
-1
1
0
```

In [186]:
```
try:
    A = math.sqrt(1000000)
    if A<110:
        print("sqaure root is:", A)
    else:
        print("Not square root")
        print("Enter valid number")
except:
    print("Mistake")
finally:
    print('program executed')
```

```
Not square root
Enter valid number
program executed
```

In [208]:
```
try:
    A = math.sqrt('shikha')
    if A<110:
        print("sqaure root is:", A)
    else:
        print("Not square root")
        print("Enter valid number")
except:
    print("Mistake")
finally:
    print('program executed')
```

```
Mistake
program executed
```

Here Except will work because we are passing string value which is highly imposible for square root

In [77]:
```
try:
    A = math.sqrt(134200)
    if A<110:
        print("sqaure root is:", A)
    else:
        print("enter valid number")
except:
        print("Mistake")
finally:
    print('program executed')
```

```
enter valid number
program executed
```

In [100]:
```
try:
    A = math.sqrt(134200)
    if A<110:
        print("sqaure root is:", A)
    else:
        print("Enter correct value")
except:
        print("enter valid number")
        print("Mistake")
finally:
    print('program executed')
```

```
Enter correct value
program executed
```

In [140]:
```
try:
    num = 56
    if num > 60:
        print("Number is positive")
    else:
        print("Number is non-positive")
except:
    print("Please enter a valid number.")
```

```
Number is positive
```

Why Except Block not working because try block is executing completely

In [141]:
```
x = 5
y = "hello"
try:
    z = x + y
except TypeError:
    print("Error: cannot add an int and a str")
```

```
Error: cannot add an int and a str
```

In [142]:
```
x = 5
y = "hello"
try:
    z = x + y
```

```
  Cell In[142], line 4
    z = x + y
              ^
SyntaxError: incomplete input
```

In [143]:
```
x = 5
y = "hello"
z = x + y
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[143], line 3
      1 x = 5
      2 y = "hello"
----> 3 z = x + y

TypeError: unsupported operand type(s) for +: 'int' and 'str'
```

In [144]:
```
x = 5
y = "hello"
try:
    z = x + y
except:
    print("Error: cannot add an int and a str")
```

```
Error: cannot add an int and a str
```

In [146]:
```
x = 89
y = "Shikha"
try:
    s = x + y
except:
    print("Bug:Fix me by entering valid inputs")
finally:
    print("Hope you understood")
```

```
Bug:Fix me by entering valid inputs
Hope you understood
```

 # trying to understand the exception handling with some logics and concepts of String, Datatypes and Basic Array System.

In [153]:
```
a = [1, 2, 3]
try:
    print ("Second element = %d" %(a[1]))

    print ("Fourth element = %d" %(a[2]))

except:
    print ("An error occurred")
```

```
Second element = 2
Fourth element = 3
```

In [154]:
```
a = [1, 2, 3]
try:
    print ("Second element = %d" %(a[1]))

    print ("Fourth element = %d" %(a[4]))

except:
    print ("An error occurred")
```

```
Second element = 2
An error occurred
```

trying to match the condition by using exception handling and Operators(==, conditions(basic if-else))

In [166]:
```
sh = 90
aa = 98
ma = 34
ga = 89
an = 90
try:
    if sh == ga:
        print("match")
    else:
        print("invalid")
except:
    print("not matched")
```

```
invalid
```

trying to check ">" condition by using exception handling.

In [172]:
```
sh = 'shikha'
aa = 98
ma = 34
ga = 89
an = 90
try:
    sh > ga
    print("match")
except:
    print("enter valid inputs")
```

```
enter valid inputs
```

trying to add two String and executing except block.

In [175]:
```
sh = 'shikha'
aa = 98
ma = 34
ga = 'Navneet'
an = 90
try:
    sh + ma
    print("match")
except:
    print("enter valid inputs")
```

```
enter valid inputs
```

In [176]:
```
sh = 'shikha'
aa = 98
ma = 34
ga = 99
an = 90
try:
    aa + ga
    print("can be added")
except:
    print("enter valid inputs")
```

```
can be added
```

In [177]:
```
sh = 'shikha'
aa = 98
ma = 34
ga = 99
an = 90
try:
    sh + ga
    print("can be added")
except:
    print("enter valid inputs")
```

```
enter valid inputs
```

trying to understand Exception handling by adding Data Types.

In [183]:
```
shikha_int = 23
shikha_float = 10.07
shikha_bool = True
shikha_complex = 2+9j
shikha_string = 'kushwaha'
try:
    shikha_int + shikha_float
    print("possible")
except:
    print("Not Possible")
```

```
possible
```

In [184]:

```
shikha_int = 23
shikha_float = 10.07
shikha_bool = True
shikha_complex = 2+9j
shikha_string = 'kushwaha'
try:
    shikha_int + shikha_string
    print("possible")
except:
    print("Not Possible")
```

```
Not Possible
```

In [185]:

```
shikha_int = 'navneet'
shikha_float = 10.07
shikha_bool = True
shikha_complex = 2+9j
shikha_string = 'kushwaha'
try:
    shikha_int + shikha_string
    print("possible")
except:
    print("Not Possible")
```

```
possible
```