In [ ]:
```
try-except

- the code will run in try

- error handling exception
```

Conditional Statements

In [ ]:
```
if - else

if pak won the match they have more chance to go to SF
else they have more chance to go home

if I study will pass
else will fail
```

In [ ]:
```
name='python'
# i want to make some condition
# whenever the name ==python ====> success
#          otherwise ========== > Fail
```

In [ ]:
```
name='python'
if <condition>:
    # sta-1
    # code

else:
    # code
```

In [ ]:
```
name='python'   # name
if name=='python': # is the name really equal to python
    print('won')
```

In [ ]:
```
a=10  # value 10 stored in a varaible'a'
a==10 # the value of a really equal to 10
```

= assign

== condition

In [2]:
```
name='python'   # assign
name=='py'  # condition
```

Out[2]:
```
False
```

In [ ]:
```
if <condition>:

if  True/False:
    inside the block
```

In [3]:
```
# True case
name='python'   # 'python' is saved in a variable 'name'
if name=='python': # is the name really equal to python if True/False:
    print('won')
```

```
won
```

In [ ]:
```
# Error capture ====> my code should not stop
# try: 100 lines   50 line you got error
# first 49 exec======= 50===> exception
```

In [6]:
```
# False case
name='python'
if name=='py':    #if <False>: no permission
    a=10
    b=20
    print(a+b)
```

In [5]:
```
a=10
b=20
print(a+b)
```

```
30
```

In [8]:
```
name='python'
if name=='py':   # False: np
    print('won')

else:
    print('lost')
```

```
lost
```

In [10]:
```
print('hello')
print(10)
num1=eval(input("enter a number1:"))
num2=eval(input("enter a number2:"))
if num1==num2:
    print("This is True case")
    print("We are doing addition operation")
    print("The addition of {} and {} is: {}".format(num1,num2,num1+num2))
    print("Happy ending!")

else:
    print("This is False case")
    print("We are doing multiplication")
    print("The multiplication of {} and {} is: {}".format(num1,num2,num1*nu

subtraction=num1-num2
print('subtraction:',subtraction)
print("great!")

# hello
# 10
# num1=enter the number: 50
# num2= enter the number=60
# if 50==60  False np to enter inside the if block
# else block
#      this false
#      we are doing mul
#      the multi 50 60 is 3000
#subtraction:-10
#great
```

```
hello
10
enter a number1:50
enter a number2:50
This is True case
We are doing addition operation
The addition of 50 and 50 is: 100
Happy ending!
subtraction: 0
great!
```

In [15]:
```
# wap ask the user enter a number
# find the number is even or odd number
# eve number: if you divide with 2 the reminder is zero
# odd number
# in python modulus opertor gives remainder
13%2==0
```

Out[15]:
```
False
```

In [16]:
```
num1=eval(input("Enter the number:")) # 55
if(num1%2==0):  # 55%2==0 False : No p
    print("The {} is even number".format(num1))
else:           # else block
    print("The {} is odd number".format(num1))
```

```
Enter the number:55
The 55 is odd number
```

In [18]:
```
try:
    num1=eval(input("Enter the number:"))
    if(num1%2==0):
        print("The {} is even number".format(num1))
    else:
        print("The {} is odd number".format(num1))

except Exception as e:
    print(e)
```

```
Enter the number:python
name 'python' is not defined
```

In [20]:
```
num1=eval(input("Enter the number:"))
if(num1%2!=0):
    print("The {} is odd number".format(num1))
else:
    print("The {} is even number".format(num1))
```

```
Enter the number:200
The 200 is even number
```

In [24]:
```
#WAP get a random number between 1 to 50
# and check it is an even number or odd number
import random
num1=random.randint(1,50)

if(num1%2!=0):
    print("The {} is odd number".format(num1))
else:
    print("The {} is even number".format(num1))
```

```
The 20 is even number
```

In [ ]:
```
try:
    num1=random.randint(1,50)

    if(num1%2!=0):
        print("The {} is odd number".format(num1))
    else:
        print("The {} is even number".format(num1))

except Exception as e:
    print(e)
```

In [ ]:
```
# WAP get a random number between 1 to 200
# print you won, if number between 10 to 99: num>=10 and num<99
# otherwise print you lost
```

In [26]:
```
import random
try:
    num=random.randint(1,200)
    if (num>=10 and num<=99):
        print("You won because {} is between 10 and 99.".format(num))
    else:
        print("you lost because {} is not between 10 and 99.".format(num))

except Exception as err:
    print(err)
```

```
You won because 56 is between 10 and 99.
```

In [27]:
```
import random
try:
    num=random.randint(1,200)
    if (10<num<99):
        print("You won because {} is between 10 and 99.".format(num))
    else:
        print("you lost because {} is not between 10 and 99.".format(num))

except Exception as err:
    print(err)
```

```
You won because 85 is between 10 and 99.
```

In [29]:
```
10<170<99
```

Out[29]:
```
False
```

In [32]:
```
# WAP ask the user enter a number
# if the number >=0  print it is a postive number
# otherwise print it is a negtaive number

num=eval(input("enter a number:"))
if num>=0:
    print("it is a pos num")
else:
    print("it is a neg num")
```

```
enter a number:99
it is a pos num
```

In [ ]:
```
# con-1: >0  ======== pos    if <cond>:
# con-2: <0 ======== neg     elif <con>
# con-3: =0 ======= zero     else:

# two conditions:  if -else
# > two condi:     if-elif-else
```

In [36]:
```
num2=eval(input("enter a number: "))
if num2>0:  # fail
    print("The given number {} is positive".format(num2))
elif num2<0: # true  : stop
    print("The given number {} is negative".format(num2))
else:       # else will not execute
    print("The given number {} is zero".format(num2))
```

```
enter a number: -10
The given number -10 is negative
```

In [ ]:
```
#WAP ask the user enter percentage of marks
# if per>90 pring A
# if per between 70 to 90  print B
# if per between 50 to 70  print C
# otherwise print D
# if -elif-elif-else
```

In [40]:
```
per=eval(input("enter your percentage: "))
if per>=90:
    print("A Grade")
elif 70<per<90:
    print("B Grade")
elif 50<per<70:
    print("C Grade")
else:
    print("D Grade")
```

```
enter your percentage: 45
D Grade
```

In [43]:
```
per=eval(input("enter your percentage: "))
if per>=90:
    print("A Grade")
elif per>=70:               # 82>70: T
    print("B Grade")        # stop
elif per>=50:
    print("C Grade")
else:
    print("D Grade")
```

```
enter your percentage: 49
D Grade
```

In [ ]:
```
# wap ask the user  enter age
# if age > 60  print (SC)
# if age between 45 to 60 ( aged)
# if age between 30 to 45 (MA)
# if age between 20 to 30 (young)
# if age between 13 to 20 (teenage)
# otherwise child

# if-elif-elif-elif-elif-else
```

In [44]:
```
age=eval(input("enter your age: "))
if age>=100:
    print("Not possible")
elif age>=60:
    print("sc")
elif age>=45:
    print("Aged")
elif age>=30:
    print("Middle age")
elif age>=20:
    print("Young")
elif age>=13:
    print("Teenage")
else:
    print("child")
```

```
enter your age: 150
SC
```

In [45]:
```
num1=eval(input('enter num1:'))
num2=eval(input("enter num2:"))
num1/num2
```

```
enter num1:10
enter num2:0

---------------------------------------------------------------------------
-
ZeroDivisionError                         Traceback (most recent call las
t)
Cell In[45], line 3
      1 num1=eval(input('enter num1:'))
      2 num2=eval(input("enter num2:"))
----> 3 num1/num2

ZeroDivisionError: division by zero
```

In [49]:
```
try:
    num1=eval(input('enter num1:'))  # 1 good
    num2=eval(input("enter num2:"))  # 2 good
    print(num1/num2) # 3 good

except Exception as e:
    print('hello')
    print(e)              # error will capture here
```

```
enter num1:10
enter num2:20
0.5
```

In [2]:
```
# WAP ask the user enter distance in km
#     if distance is more than 10km : print charge is 100rs
#     if distance is between 7 to 10km: print charge is 70rs
#     if distance is between 4 to 7km: print charge is 40rs
#     otherwise print charge is 30rs

# total 4:  if -elif -elif -else
# step-1:
distance=eval(input("enter distance in km"))
if distance>=10:
    print("the charge is 100 rs")

elif distance>=7:
    print("the charge is 70rs")

elif distance>=4:
    print("the charge is 40rs")

else:
    print("the charge is 30rs")

# distance=6km
```

```
enter distance in km6
the charge is 40rs
```

In [ ]:
```
# WAP ask the user enter salary
# if salary greater than 10laks :
#            ask the user enter tax perecentage : 10%
#            print: the amount of tax paid:  (salary*tax_per)/100
# if salary between 7 lakhs to 10laks
#           ask the user enter tax percentage: 5%
#           print the amount of tax paid
#if salary between 4 to 7 lakhs
#          ask the user enter tax percentage: 2.5%
#          print the amount of tax paid
# otherwise: print ('No tax required')
# if -elif-elif-else
```

In [3]:
```
salary=eval(input("enter salary:"))
if salary>=1000000:
    tax_per=eval(input("enter tax percentage"))
    print("amount of tax paid:",(salary*tax_per)/100)
elif salary>=700000:
    tax_per=eval(input("enter tax percentage"))
    print("amount of tax paid:",(salary*tax_per)/100)
elif salary>=400000:
    tax_per=eval(input("enter tax percentage"))
    print("amount of tax paid:",(salary*tax_per)/100)
else:
    print("No tax is required")
```

```
enter salary:750000
enter tax percentage5
amount of tax paid: 37500.0
```

In [ ]:
```
# Wap ask the user enter which operation you need to perform
#                         operations are : addition/ mul/sub/div : input()
#  ask the user enter a number1= eval(input())
#  ask the user enter a number2 = eval(input())
#  if the operation equal to addition
#                   print("we are doing addition operation")
#                   print("the addition of num1 and num2 is ")
#  if the operation equal to multiplication
#                   print("we are doing multiplication operation")
#                   print("the multiplication of num1 and num2 is ")
#  if the operation equal to subtraction
#                   print("we are doing subtraction operation")
#                   print("the subtraction of num1 and num2 is ")
#  if the operation equal to division
#                   print("we are doing division operation")
#                   print("the division of num1 and num2 is ")
# else:
#     print("provide suitable operation")

# if ---- elif ---- elif ---- elif ----else
```

In [7]:
```
try:
    operation=input("enter which operation wnat to perform:")
    num1=eval(input("enter a num1:"))
    num2=eval(input("enter a num2:"))
    if operation=='addition':
        print("we are performing addition operation")
        print("the addition of {} and {} is {}".format(num1,num2,num1+num2)

    elif operation=='subtraction':
        print("we are performing subtraction operation")
        print("the subtraction of {} and {} is {}".format(num1,num2,num1-nu

    elif operation=='mul':
        print("we are performing mul operation")
        print("the mul of {} and {} is {}".format(num1,num2,num1*num2))

    elif operation=='div':
        print("we are performing div operation")
        print("the div of {} and {} is {}".format(num1,num2,num1/num2))

    else:
        print("provide suitable operation")

except Exception as e:
    print(e)
```

```
enter which operation wnat to performdiv
enter a num1:20
enter a num2:0
we are performing div operation
division by zero
```

In [4]:
```
op=input("Which operation you want perform addition, multiplication, subtra
no1=eval(input("enter 1st number: "))
no2=eval(input("enter 2nd number: "))
if op=="addition":
    print("we're performing addition")
    print("the addition of {} and {} is:".format(no1,no2,(no1+no2))
elif op=="multiplication":
    print("we're performing multiplication")
    print("the multiplication of {} and {} is:".format(no1,no2,(no1*no2))
elif op=="subtraction":
    print("we're performing subtraction")
    print("the subtraction of {} and {} is:".format(no1,no2,(no1-no2))
elif op=="division":
    print("we're performing division")
    print("the division of {} and {} is:".format(no1,no2,(no1/no2))
else:
    print("provide suitable operation")
```

```
  Cell In[4], line 7
    elif op=="multiplication":
    ^
SyntaxError: invalid syntax
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [8]:
```
try:
    print("if you want to perform addition operation, enter + symbol")
    print("if you want to perform sub operation, enter - symbol")
    print("if you want to perform mul operation, enter * symbol")
    print("if you want to perform div operation, enter / symbol")
    operation=input("enter which operation wnat to perform:")
    num1=eval(input("enter a num1:"))
    num2=eval(input("enter a num2:"))
    if operation=='+':
        print("we are performing addition operation")
        print("the addition of {} and {} is {}".format(num1,num2,num1+num2)

    elif operation=='-':
        print("we are performing subtraction operation")
        print("the subtraction of {} and {} is {}".format(num1,num2,num1-nu

    elif operation=='*':
        print("we are performing mul operation")
        print("the mul of {} and {} is {}".format(num1,num2,num1*num2))

    elif operation=='/':
        print("we are performing div operation")
        print("the div of {} and {} is {}".format(num1,num2,num1/num2))

    else:
        print("provide suitable operation")

except Exception as e:
    print(e)
```

```
if you want to perform addition operation, enter + symbol
if you want to perform sub operation, enter - symbol
if you want to perform mul operation, enter * symbol
if you want to perform div operation, enter / symbol
enter which operation wnat to perform:*
enter a num1:20
enter a num2:30
we are performing mul operation
the mul of 20 and 30 is 600
```

In [10]:
```
import time
try:
    print("if you want to perform addition operation, enter 1")
    print("if you want to perform sub operation, enter 2")
    print("if you want to perform mul operation, enter 3")
    print("if you want to perform div operation, enter 4")
    time.sleep(3)
    operation=input("enter which operation wnat to perform:")  # string
    num1=eval(input("enter a num1:"))
    num2=eval(input("enter a num2:"))
    if operation=='1':
        print("we are performing addition operation")
        print("the addition of {} and {} is {}".format(num1,num2,num1+num2)

    elif operation=='2':
        print("we are performing subtraction operation")
        print("the subtraction of {} and {} is {}".format(num1,num2,num1-nu

    elif operation=='3':
        print("we are performing mul operation")
        print("the mul of {} and {} is {}".format(num1,num2,num1*num2))

    elif operation=='4':
        print("we are performing div operation")
        print("the div of {} and {} is {}".format(num1,num2,num1/num2))

    else:
        print("provide suitable operation")

except Exception as e:
    print(e)
```

```
if you want to perform addition operation, enter 1
if you want to perform sub operation, enter 2
if you want to perform mul operation, enter 3
if you want to perform div operation, enter 4
enter which operation wnat to perform:5
enter a num1:20
enter a num2:30
provide suitable operation
```

Nested if else

In [ ]:
```
# wap ask the user enter a number
# if the number greater than zero:
#               if the number==0:
#                    print('it is a zero number')
#               else:
#                      print("it is pos number")
# else:
#     print("it is a negative number")
```

In [15]:
```
number=eval(input("enter a number:"))
if number>=0:
    if number==0:
        print("it is a zero number")
    else:
        print("it is a postive number")

else:
    print("it is negative number")
```

```
enter a number:-60
it is negative number
```

In [ ]:
```
# WAP ask the user enter gender either male or female
#if gender equal to male
#         ask the user enter age
#         if age>60: print(cs)
#         if  age betwen 30 to 60 print(middile aged man)
#         if  age between 20 to 30 : print( young boy)
#         if age between 13 to 20 : print(teenage boy)
#         otherwise : print('boy')

# else:
#         ask the user enter age
#         if age>60: print(cs)
#         if  age betwen 30 to 60 print(middile aged woman)
#         if  age between 20 to 30 : print( young girl)
#         if age between 13 to 20 : print(teenage girl)
#         otherwise : print('girl')
```

In [20]:
```
try:
    gender=input("Enter gender either male or female : ")
    if gender=="male":
        age=eval(input("Enter your age: "))
        if age>60:
            print("CS")
            if age>100:
                print('gunnis book')
        elif age>=30:
            print("middile aged man")
        elif age>=20:
            print("young boy")
        elif age>=13:
            print("teenage boy")
        else:
            print("boy")
    elif gender=='female':
        age=eval(input("Enter your age: "))
        if age>60:
            print("CS")
        elif age>=30:
            print("middile aged woman")
        elif age>=20:
            print("young girl")
        elif age>=13:
            print("teenage girl")
        else:
            print("girl")
    else:
        print("provide proper gender")
except Exception as e:
    print(e)
```

```
Enter gender either male or female : male
Enter your age: 150
CS
gunnis book
```

In [ ]:
```
# wap ask the user enter 3 numbers
# find the biggest number
```

In [ ]:
```
```