5th-Nov

- conditional statements refers to execute the code based on the some conditions
- We have mainly three types
  - if
  - if else
  - if elif else

In [1]:
```
print('hello good morning')
```

```
hello good morning
```

In [2]:
```
# I want to say good morning
# if your name is pyhton
```

Syntax

In [ ]:
```
if <condition>:
    <write your code here..>
```

In [4]:
```
num = 10
if num >0: # 10>0 = True if True then run the code
    print("correct condition")
    print("Hello")
```

```
correct condition
Hello
```

- The space we need to maintain it is called as indentaion

In [2]:
```
name = 'python' # here = means assigning inside the variable
name == 'python' # here == means condition checking
```

Out[2]: True

Note

- (=) single equal to means assigning inside the variable
- (==) double equal to means condition checking
  - when we check condition the output comes in the boolean
    - ex:- True or False

In [3]:
```
name != 'python'
```

Out[3]: False

In [4]:
```
name = 'python'
if name == 'python':
    print('Hello')
    a = 10
    b = 20
    print(a+b)

# step-1: nmae = 'python'
# step-2: if name == 'python' if 'python' == 'python' if true then run
# step-3: print(hello)
# step-4: a=10
# step-5: b = 20
# ste-6: a+b = 10+20 = 30
```

```
Hello
30
```

In [5]:
```
if 100>10:
    print('Correct')
print("Bye|")
```

```
Correct
Bye|
```

if-else

- Whenever if condition falis automatically it goes to else part
- so else does not require any condition
- always maintain indentation for both if part and else part

In [6]:
```
if 100>10:
    print("Correct condition")
else:
    print("Wrong condition")
```

```
Correct condition
```

In [7]:
```
if 100<10:
    print("Correct condition")
else:
    print("Wrong condition")
```

```
Wrong condition
```

In [10]:
```
print(10)
if 100<10:
    print("Correct condition")
else:
    print("Wrong condition")
print(20)
```

```
10
Wrong condition
20
```

In [11]:
```
print(10)
if 100<10:
    print("Correct condition")
```

```
    print("Okay")
print("Why?")
else:
    print("Wrong condition")
print(20)
```

```
  Cell In[11], line 6
    else:
    ^
SyntaxError: invalid syntax
```

- dont write any thing inside the if and else part
- if and else always together

QUE:

In [12]:
```
num1 = eval(input("Enter a num:"))
num2 = eval(input("Enter a num:"))
if num1 == num2:
    print("We are Won")
else:
    print("We are lost")
```

```
We are lost
```

In [14]:
```
import random
num1 = random.randint(1,10)
num2 = eval(input("Enter a num2:"))
if num1 == num2:
    print("We are Won")
else:
    print("We are lost")
```

```
We are lost
```

In [15]:
```
import random
num1 = random.randint(1,10)
print(num1)
num2 = eval(input("Enter a num2:"))
if num1 == num2:
    print("We are Won")
else:
    print("We are lost")
```

```
10
We are Won
```

- QUE

In [19]:
```
5/2 # division
```

Out[19]: 2.5

In [20]:
```
5//2 # floor division
```

Out[20]: 2

In [21]:
```
5%2 # modulus operator
```

Out[21]: 1

In [23]:
```
num = eval(input("Enter a number"))
if num % 2==0:
    print(f"The given {num} is even")
else:
    print(f"The given {num} is odd")
```

```
The given 5 is odd
```

- QUE

In [26]:
```
distance = eval(input('Enter a distance:'))
if distance >= 25:
    print('what is the charges')
    d1 = distance-25
    charge = d1*15
    print(f'The charge you will pay is {charge}')
else:
    print("Free ride")
```

```
what is the charges
The charge you will pay is 15
```

- Que

In [27]:
```
n1 = eval(input("Enter a num1: "))
n2 = eval(input("Enter a num2: "))

if n1 > n2:
    print(f"The {n1} is greater number")
else:
    print(f"The {n2} is greater number")
```

```
The 45 is greater number
```

In [30]:
```
import random
n1 = random.randint(1,100)
n2 = random.randint(1,100)
if n1 > n2:
    print(f"The {n1} is greater number")
else:
    print(f"The {n2} is greater number")
```

```
The 61 is greater number
```

- Que

In [32]:
```
course_name = input("Enter a course name:")
in_name = input("Enter a institute name:")
if course_name == 'data science' and in_name == 'naresh it':
    print("We are good")
else:
    print('Not good')
```

```
Not good
```

6th-nov

if-elif-else

- when we have two solutions based on one condition
- then we can go for if-else
- when we have 3 solutions based on two conditions
- then we go for if-elif-else
- if needs condition
- elif needs condition
- if and elif both are wrong then will get else output

In [ ]:
```
two condition: if elif else
three condition: if elif elif else
four condition: if elif elif elif elif else
```

- Que

In [35]:
```
num = eval(input("enter a number"))
if num == 1:
    print("one")
elif num ==2:
    print("two")
elif num ==3:
    print("three")
else:
    print("enter a vaild number")
```

```
enter a vaild number
```

- Que

In [40]:
```
percentage = eval(input("enter your percentage of marks"))
if percentage >=75:
    print("A grade")
elif percentage >=60:
    print("B grade")
elif percentage >=45:
    print("C grade")
elif percentage >=35:
    print("D grade")
else:
    print("Fail")
```

```
C grade
```

In [43]:
```
age = eval(input("enter age:"))
if age >=100:
```

```
    print("Unlucky guy")
elif age >=80:
    print("Super Senior citizen")
elif age >=60:
    print("Super senoir")
elif age >=40:
    print("Aged")
elif age >=25:
    print("MA")
elif age >=15:
    print("Young")
else:
    print("Kids")
```

```
Kids
```

- Que

In [48]:
```
dis = eval(input("ENter a distance:"))
print('charge is 20 for morethan 100km')
print('charge is 10 for morethan 50 to 100km')
print('charge is 5 for morethan 25 to 50km')
print('free ride for less than 25')
if dis >=100:
    charge = 20
    total_c = dis*charge
    print(total_c)
elif dis >=50:
    charge = 10
    total_c = dis*charge
    print(total_c)
elif dis >=25:
    charge = 5
    total_c = dis*charge
    print(total_c)
else:
    print("Free Ride")
```

```
charge is 20 for morethan 100km
charge is 10 for morethan 50 to 100km
charge is 5 for morethan 25 to 50km
free ride for less than 25
550
```

In [55]:
```
import time
print("Enter 1 for addition")
time.sleep(2)
print("Enter 2 for substraction")
time.sleep(2)
print("Enter 3 for multipication")
time.sleep(2)
print("Enter 4 for division")

operation = eval(input("enter number between 1 to 4"))
if operation == 1:
    n1 = eval(input("enter num1"))
    n2 = eval(input("enter num2"))
    add = n1+n2
    print(f'the addition of {n1} and {n2} is {add}')
elif operation == 2:
```

```
    n1 = eval(input("enter num1"))
    n2 = eval(input("enter num2"))
    sub = n1-n2
    print(f'the substraction of {n1} and {n2} is {sub}')
elif operation == 3:
    n1 = eval(input("enter num1"))
    n2 = eval(input("enter num2"))
    mul = n1*n2
    print(f'the multiplication of {n1} and {n2} is {mul}')
elif operation == 4:
    n1 = eval(input("enter num1"))
    n2 = eval(input("enter num2"))
    div = n1/n2
    print(f'the division of {n1} and {n2} is {div}')
else:
    print("enter a vaild number")
```

```
Enter 1 for addition
Enter 2 for substraction
Enter 3 for multipication
Enter 4 for division
the division of 40 and 20 is 2.0
```

In [ ]:
```
# nested if else
# try-except
# functions
# loops
```

nested if-else

- Que:- if elif else

In [5]:
```
num = eval(input("Enter a number"))
if num >0:
    print("positive number")
elif num<0:
    print("negative number")
else:
    print("zero")
```

```
zero
```

- Que:- nested if-else

In [9]:
```
num = eval(input("enter a number"))
if num >=0:
    if num ==0:
        print("zero")
    else:
        print("positive number")
else:
    print("negative number")
```

```
negative number
```

- Que:-

In [12]:
```
gender = input("enter a gender")
if gender == 'male':
    age = eval(input("enter age"))
    if age >=60:
        print("S.c.man")
    elif age >=30:
        print("Middle aged man")
    elif age >=18:
        print("Young Man")
    else:
        print("Boy")
elif gender == 'female':
    age = eval(input("enter age"))
    if age >=60:
        print("S.c.woman")
    elif age >=30:
        print("Middle aged woman")
    elif age >=18:
        print("Young girl")
    else:
        print("girl")
else:
    print("enter a valid gender")
```

```
S.c.woman
```

In [13]:
```
gender = input("enter a gender")
if gender == 'male':
    age = eval(input("enter age"))
    if age >=60:print("S.c.man")
    elif age >=30:print("Middle aged man")
    elif age >=18:print("Young Man")
    else:print("Boy")
elif gender == 'female':
    age = eval(input("enter age"))
    if age >=60:print("S.c.woman")
    elif age >=30:print("Middle aged woman")
    elif age >=18:print("Young girl")
    else:print("girl")
else:print("enter a valid gender")
```

```
Young Man
```

- Que

In [14]:
```
num1 = eval(input("enter a number"))
num2 = eval(input("enter a number"))
num3 = eval(input("enter a number"))

if num1 > num2 and num1 >num3:
    print(f"the biggest number is {num1}")
elif num2> num3:
    print(f"the biggest number is {num2}")
else:
    print(f"the biggest number is {num3}")
```

```
the biggest number is 70
```

In [22]:
```
num1 = eval(input("enter a number"))
num2 = eval(input("enter a number"))
num3 = eval(input("enter a number"))

if num1 > num2:
    if num1>num3:
        print(f"the biggest number is {num1}")
    else:
        print(f"the biggest number is {num3}")
elif num2>num3:
    print(f"the biggest number is {num2}")
else:
    print(f"the biggest number is {num3}")
```

```
the biggest number is 1
```

In [ ]:

In [ ]:

In [ ]: