Agenda $\longrightarrow$ Usage of conditionals in python
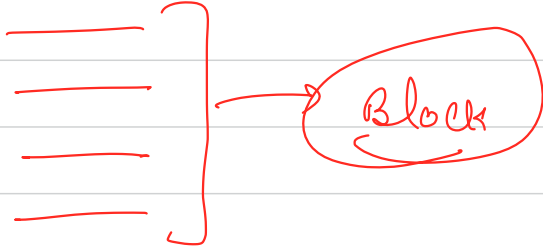
Usage of loops in python
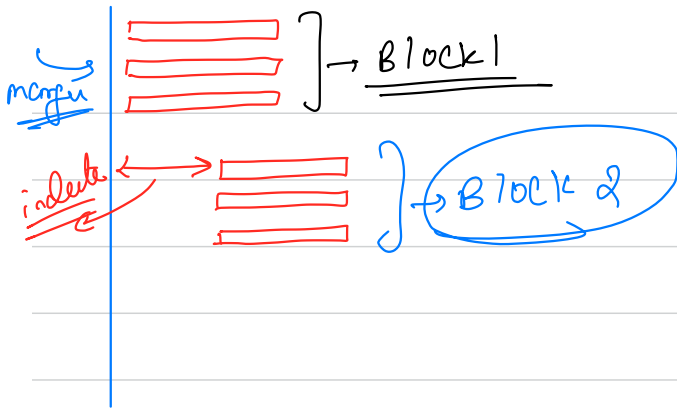
Conditionals → Decision making process

→ **Statement** → It is a syntactic unit of a language that expresses some action to be carried out.

→ In python, generally one line of code represents one statement.

Blocks → Some set of statements define one block of
code

Block

Indentation ——→ a part of space given before a

statement is called indentation.

→ Block1

margin

indent

→ Block 2

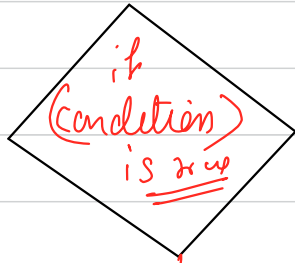we went a separate Block

When we need to
gue sefeerte

loops, condition

Conditionals / decision

Decision making Statements

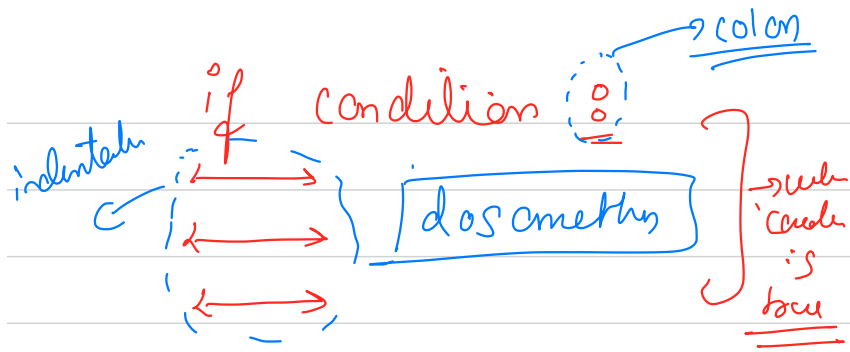→ Based on some condition you do something

How to implement in python

if (condition) is true

false → do execute anothr thru

True → execute some

if (condition)
do some

else
do someth

if condition : → colon

indentation

do something } such condition is true

else :

do something

We write if condition & then start a new block by gen a colon after if statement & initiate a new block

If implies the rule that for the statement to be executed while condition is true, they need to be in a separate block

If we want to execute something specific when condition is false use 'else'

Q-1 We are building something like a Calculator.

$a \; \square \; b$

$\longrightarrow$ operator $(+, -, *, /)$

User gave us a and b and an operator

Now if need to check whether the operator is a + or - or * or /.

operator $\rightarrow$ + $a + b$

operator $\rightarrow$ - $a - b$

operator $\rightarrow$ * $a * b$

operel $\rightarrow$ / a / b

multiple ifs

if operater == '+'
  a + b

if operate == '-'
  a - b
  .
  .
  .

Instead of if's we can

use *elif*

```
if condition1 is true:
    do something

elif condition2 is true:
    do something

elif condition3 is true:
    do something

else:
    do something
```

elif → else if

if condition1 is true :
    do something

elif condition2 is true:
    do something

elif condition3 is true
    do someth

else :
    do someth

---

if condition1 is true :
    do something

if condition2 is true:
    do something

if condition3 is true
    do someth

if :
    do someth

any level of nesting inside if elf & else

To put one level nesting we need to have it inside the block of above conditional

checked first → True

```
48  if 10 > 5:
49      if 5 < 3:        → check → false
50          print("first nested if")
51      elif 4 > 2:      → check → true
52          if 3 < 4:    → check → true
53              print("second nested if inside elif")     → ans
54          else:
55              print("else inside first elif")
56      elif 17 > 8:
57          print("second elif")
58      else:
59          print("else")
60  elif 4 % 2 == 0:
61      print("end")
62
```

There is no rule that we always need else for elif &
if.

There is no rule that we always need elif for if.

How do you give repeated command in english

while I am outside, please complete HW.

↓

content of
repetive in english

while ⟶ "Jab tak"

⟶ In python, we write loops using while

Loops in python

if / while

condut
Check once

condition
checked again & again

while condition :

⟵⟶

⟵⟶ do this ()

⟵⟶

```
3   i = 1
4
5   while i < 10:        → True 1<10
6       print("value
7       i = i + 1
```

i	output
1	value of i is 1
2	value of i is 2
3	value of i is 3
4	value of i is 4
9	value of i is 9
10	

Q. Given 3 angles, check if they can be 3 angles of a valid triangle.