

Hello everyone

1. Loops/ Iteration

└→ for
└→ while

2. Range

3. Few Questions / First real assignment

Iteration / Looping

Need of looping? \Rightarrow To do some action
or task which is
similar or exactly
same more than
one time

The issue is that if we don't loop
our code becomes unnecessarily
long & complex.

\Rightarrow Simple
 \Rightarrow As small as possible }

DRY
 \Downarrow
Do not repeat
yourself.

We write loops when we have to
run a cell multiple cells.

In python, we have 2 loops

1. While

2. For

do... while

doesn't exist
in python.

while loop

Syntax ÷

While Conditional :

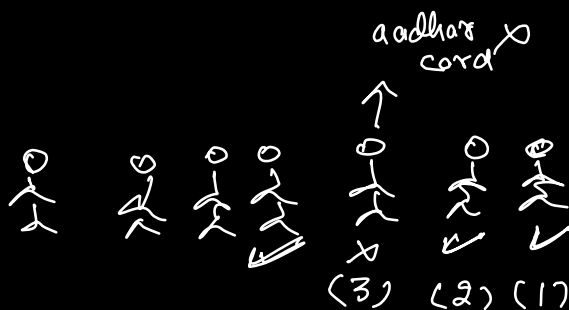
logic of
what to
do
Condⁿ update

To make sure
It doesn't end
up as a ∞
loop, make sure
to update the condition

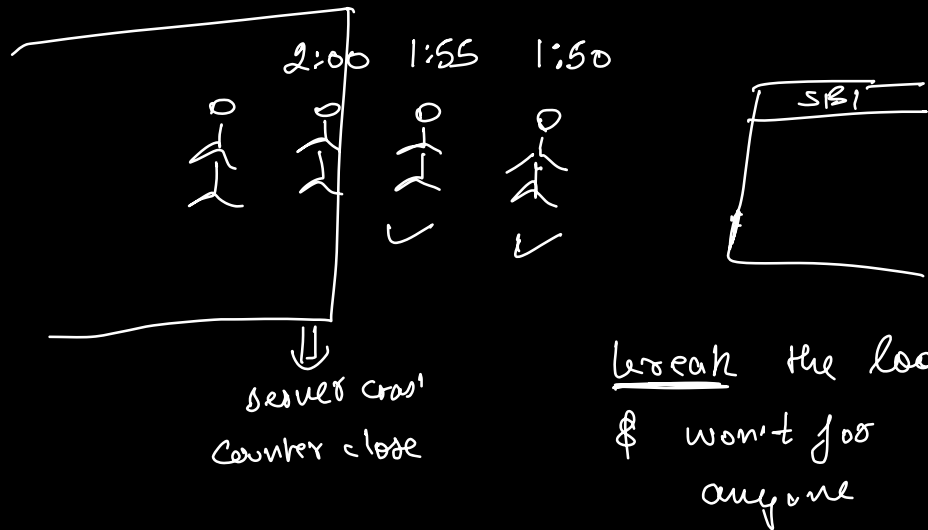
```
start = 0
end = 3
while ( start < end ) :
    print(start)
```

while(start < end):
——— start

start	end	True
0	3	✓
0	3	



we will continue
working for
others after (3)



Break statement

Ideally, loop only ends when its condition becomes false

But But But, we can also end the loop & come out of iteration by using break keyword.

Continue

```
start = -2
end = 2

while(start < end):
    if(start == 0):
        start += 1
        continue

    print(100/start)
    start += 1 # start = start + 1

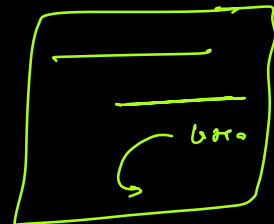
print("I am outside of loop")
```

→ very imp
statement

In continue we go to the next iteration.

whereas in break we were coming out of loop.

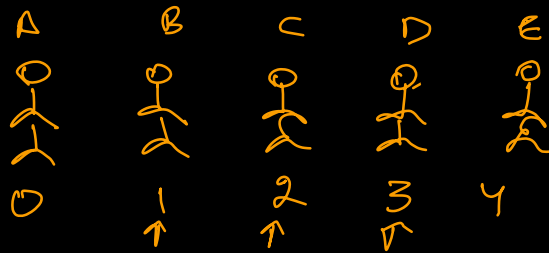
After break or continue is faced,
no statement is executed for that
particular loop.



For loop

Like while it is another loop.

Help us to run statements iteratively
on a sequence / iterable.



index vs element

s = abc

while start < 3:

 s[start]

 start = start + 1

or

it works on a
condⁿ.

for elem in a:

 a

For loop handles increment
after a single iteration
gets completed.

Syntax:

for some_var in iterable:

loop body

⇐ normal
code flow.

We use for loop when working ~~on~~
with an iterable

and

while loop when you are
working with a condⁿ.

Industry use cases

⇒ email problem

⇒ numbers $+91-9999$

⇒ send OTP or log in msg.

⇒ save multiple

You have to create a python
notebook & mail it to

"mayank @ ~~incubator.ai~~"

with subject

"fSDS - ~~AI~~"