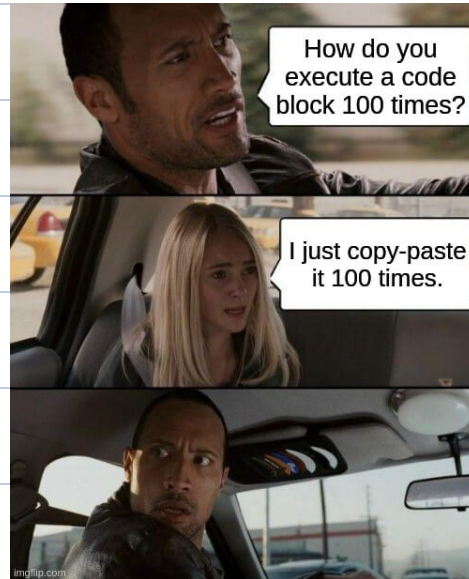


Agenda

1) While loop

2) For loop



(Conditional Statement & Loops) → Backbone of a program.



0	0	0
0	0	1
0	0	2
⋮	⋮	⋮
9	9	9

$10 \times 10 \times 10 = \underline{\underline{10^3}}$

check(num)

num = 0

check(num)

num = num + 1 1

check(num)

num = num + 1 2

check(num)

num = num + 1 3

check(num)

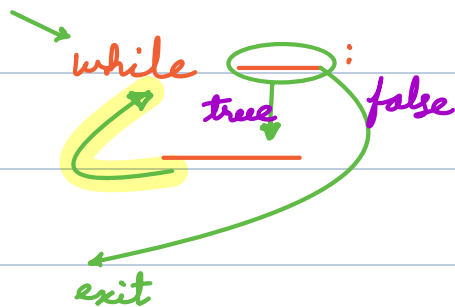
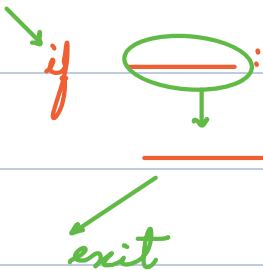
⋮

num = 0

while (still locked) :

check(num)

num = num + 1



Questions on While loop

Q → Print numbers from 1 to 5.

```
n = 1
print(n) 1
n = n + 1
print(n) 2
n = n + 1
print(n) 3
n = n + 1
print(n) 4
n = n + 1
print(n) 5
```

```
n = 1
while n <= 5:
    print(n)
    n += 1
```

Q → Take start & end as input & print all even numbers between them. ✓

end & sep in print()

Q → Print numbers 1 to N in a single line separated by ','

Eg → N=5 o/p → 1, 2, 3, 4, 5

```
N = int(input())
```

```
x = 1
```

```
while x <= N:
```

```
    if x < N:
```

```
        print(x, end=", ")
```

```
    else:
```

```
        print(x)
```

```
    x += 1
```

```
print("Completed!")
```

→ ";" "\$"

default end = "\n" next line

"\t" tab space

```
print(1, 2, 3, 4)
```

→ default sep = ' '

o/p → 1 2 3 4

↓
' '

```
print(1, 2, 3, 4, sep="u")
```

↓
#

1 u 2 u 3 u 4

↓
#

For loop

while condition is true:

do this

for element in range:

do this

range()

range(3, 6) → 3 4 5

included

excluded

range(start, end) → start, (start+1), ... (end-1)

range(end) → 0, 1, 2 ... (end-1)

range(start, end, jump) →

start, start + jump, start + 2*jump, ...