

# Full stack web development using python

## While loop



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## Agenda

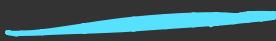
- ① Iterative control
- ② while
- ③ Practice problem
- ④ break
- ⑤ continue
- ⑥ else with loop
- ⑦ pass

# Iterative Control (Loop)

① while

② for

X do while



Keyword

while



while condition :

code

code

code

code

F T

while  
block



Write a program to print MySirG  
five times.

i = 1

while i <= 5:

    print("MySirG")

    i += 1

i → 6

MySirG

MySirG

MySirG

MySirG

MySirG

Write a program to print first 10 natural numbers.

1 2 3 4 5 6 7 8 9 10

```
i=1  
while i<=10:  
    print(i, end=' ')  
    i+=1
```

i = 1 2 3 ... 10

Write a program to print first 10 natural numbers in reverse order

i

i

10 9 8 7 6 5 4 3 2 1 0  
T T T T T T T T T F

i >= 0

10

9

8

7

6

5

4

3

2

1

0

i >= 1 ✓ i → 10

10

9

8

7

6

5

4

3

2

1

0

✓ i > 0

✓ i → 10

✓ i → 9

✓ i → 8

✓ i → 7

True  
True

True  
False

i <= 11

i >= 10

10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
0

i <= 0

i <= 0

i

print((i-i))

1

2

3

⋮

10

10

9

8

1

Write a program to print first n even natural numbers.

2 4 6 8 .....

$n = 10$

2 4 6 8 10 12 14 16 18 20

$i = 2 \ 4 \ 6 \ \dots$

$i += 2$

$i \leq 2 * n$

$i = 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10$

$i += 1$

$i \leq n$

`print(2*i)`

## break

- break is a keyword
- break is used to transfer control outside the loop body.
- break can only be used in the body of loop
- break terminates the execution of loop

Write a program to ask user to enter an even number at most 3 times. If user failed to enter an even number in all the three chances then he has lost the game. If user enter an even number, then no more chances will be given and announced him a winner.

## continue

- Continue is a Keyword
- It can only be used in the body of loop.
- Continue transfers the control immediately to the next iteration

## Example

```
i=1  
x=int(input("Enter a number"))
```

```
while i<=10:
```

```
    if x%2==0:
```

```
        continue
```

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

```
    i+=1
```

x = 3

i = x2

1 x = 3

2 x = 3

3 x = 3

:

10 x = 3

## else with while loop

while condition :

code

code

else :

code

else block executes when while loop terminates normally.

else block won't be execute when loop terminates due to break statement.

## pass

pass keyword is used to create empty block.

```
if condition : | while condition :  
    pass      |     pass
```