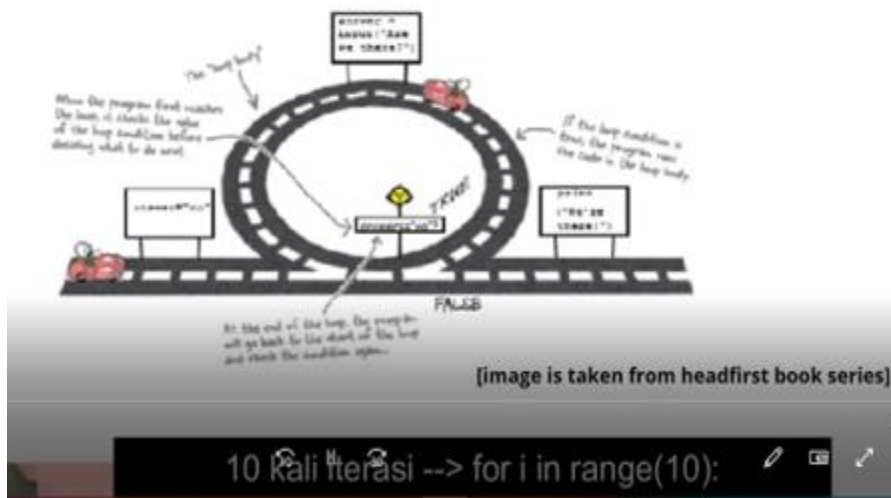


For utk iterasi yg diketahui jmh perulangannya

Iterasi - Loop

Loop, Iteration, Repetition



Jumlah iterasi yg tdk diketahui dg while.

Iterasi - Loop

Loop, Iteration, Repetition

Number of Iteration : unknown

```
Initialize_condition
while condition_is_True:
    Syntax_1
    Syntax_2
    ...
    Syntax_n
    stopping_Condition
```

Note : Do not forget to stop the iteration by making the condition False (stopping condition)

while

```
In [1]: ► while i<=5: I
          print(i)

-----
NameError                                Traceback (most recent call last)
<ipython-input-1-2a78c638dba4> in <module>
----> 1 while i<=5:
      2     print(i)

NameError: name 'i' is not defined
```

```
In [1]: ► 1 i=0
          2 while i<=5:
          3     print(i)
```

Supaya python bs eksekusi syntax while maka sbkm while harus diberi inisialisai, misal $i = 0$.

while

```
In [2]: ► 1 i=6 I
          2 while i<=5:
          3     print(i)
          4     print('end of while')

end of while
```

Krn loop condition: $6 \leq 5$ bernilai False, maka iterasi tidak akan dieksekusi baris ke 3 dst.

while

```
In [*]: ► 1 i=0
          2 while i<=5:
          3     print(i)
          4     print('end of while')
```

0 terus diprint tdk berhenti..atau terjadi error/hang. Karena tdk ada stopping condition shg mnnyebabkan loop condition bernilai False.

```
In [*]: 1 i=0
        2 while i<=5:
        3     print(i)
        4     print('end of while')
```

variabel i selalu bernilai 'hol'
Loop Condition akan selalu True

Sehingga diperlukan stopping condition.

1. Stopping condition yang ada di dalam coding.

while

```
In [ ]: 1 i=0
        2 while i<=5:
        3     print(i)
        4     i=i+1
        5     print('end of while')
```

i=0, 0<=5 : True

i=1, 1<=5 : True

i=2, 2<=5 : True

...

i=6, 6<=5 : False

iterasi berhenti

Jika kondisi True dilakukan iterasi baris 3&4, Klo sdh bernilai False, maka langs menuju baris ke 5.

while

```
In [1]: 1 i=0
        2 while i<=5:
        3     print(i)
        4     i=i+1
        5     print('end of while')
```

```
0
1
2
3
4
5
end of while
```

```
In [2]: 1 i=0
        2 while i<=5:
        3     print(i)
        4     #i=i+1
        5     i+=1
        6     print('end of while')
```

```
0
1
2
3
4
5
end of while
```

```
In [3]: 1 i=0
        2 while i<5:
        3     print(i)
        4     #i=i+1
        5     i+=1
        6     print('end of while')
```

```
0
1
2
3
4
end of while
```

```
In [4]: i=0
while i<=5:
    if i%2==1:
        print(i)
    #i=i+1
    i+=1
print('end of while')
```

1
3
5
end of while

```
In [5]: bilangan=0
counter=1
while counter<=5:
    if bilangan%2==1:
        print('bilangan ganjil-',counter,'=',bilangan)
        counter+=1
    bilangan+=1
print('end of while')
```

bilangan ganjil- 1 = 1
bilangan ganjil- 2 = 3
bilangan ganjil- 3 = 5
bilangan ganjil- 4 = 7
bilangan ganjil- 5 = 9
end of while

```
In [6]: bilangan=0
counter=1
while counter<=10:
    if bilangan%2==1:
        print('bilangan ganjil-',counter,'=',bilangan)
        counter+=1
    bilangan+=1
print('end of while')
```

bilangan ganjil- 1 = 1
bilangan ganjil- 2 = 3
bilangan ganjil- 3 = 5
bilangan ganjil- 4 = 7
bilangan ganjil- 5 = 9
bilangan ganjil- 6 = 11
bilangan ganjil- 7 = 13
bilangan ganjil- 8 = 15
bilangan ganjil- 9 = 17
bilangan ganjil- 10 = 19
end of while

2. Stop condition berasal dari input user

```
In [ ]:  stop=False
        while not(stop):
```

Not(False) berarti bernilai True

```
In [7]: 1 stop=False
        2 while not(stop):
        3     inp=input('lagi (y/t) ? ')
        4     if inp=='y':
        5         stop=False
        6     else:
        7         stop=True
```

```
lagi (y/t) ? y
lagi (y/t) ? y
lagi (y/t) ? y
lagi (y/t) ? y
lagi (y/t) ? y
lagi (y/t) ? y
lagi (y/t) ? t
```

3. Kondisi1 operatorLogika kondisi2 bisa bernilai True/False

```
In [ ]:  #kondisi 1 --> False
        #kondisi 2 --> False

        # AND : T and F --> F, F and F --> F
        # OR  : T or F --> T
```

```

8 stop=False
9 bilangan=0
10 counter=1
11 while counter<=4 and not(stop):
12     if bilangan%2==1:
13         print('Bilangan ganjil-',counter,'=',bilangan)
14         counter+=1
15     else:
16         print('bukan bilangan ganjil')
17     inp=input('lagi (y/t) = ')
18     if inp=='y':
19         stop=False
20     else:
21         stop=True

```

bukan bilangan ganjil
lagi (y/t) = y
bukan bilangan ganjil

lagi (y/t) =

```

10 counter=1
11 while counter<=4 and not(stop):
12     if bilangan%2==1:
13         print('Bilangan ganjil-',counter,'=',bilangan)
14         counter+=1
15     else:
16         print('bukan bilangan ganjil')
17     bilangan+=1
18     inp=input('lagi (y/t) = ')
19     if inp=='y':
20         stop=False
21     else:
22         stop=True

```

bukan bilangan ganjil

lagi (y/t) =

't' --> stop=True
counter<=4 and not(stop) --> 1<=4 and not(True) --> True and False
akan bernilai False --> iterasi berhenti

```
bukan bilangan ganjil
lagi (y/t) = y
Bilangan ganjil- 1 = 1
lagi (y/t) = y
bukan bilangan ganjil
lagi (y/t) = y
Bilangan ganjil- 2 = 3
lagi (y/t) = y
bukan bilangan ganjil
lagi (y/t) = y
Bilangan ganjil- 3 = 5
lagi (y/t) = y
bukan bilangan ganjil
lagi (y/t) = y
Bilangan ganjil- 4 = 7
lagi (y/t) = y
```

Jika dimasukkan y terus selama 4 kali maka iterasi tetap berhenti, meskipun bukan t yang user masukkan