

# for loop:

A for loop in Python is used to iterate over a sequence (such as a list, tuple, string, or range) and execute a block of code multiple times. It's especially useful when you know the number of iterations beforehand or need to process elements in a sequence.

Basic Syntax:

## 1) print odd value between 20 and 80, without using if.

```
In [1]: for num in range(21, 81, 2):  
        print(num)
```

```
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```

```
In [ ]:
```

## 2) creat a list of 1 to 20 number using for loop [1,2,3..20]

```
In [6]: numbers = []  
        for num in range(1, 21):  
            numbers.append(num)  
  
        print(numbers)
```

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20]

3) create a list of 20 to 1 value using for loop (dont Use Reverse)  
[20,19,18,...3,2,1]

```
In [9]: numbers = []
        for num in range(20, 0, -1):
            numbers.append(num)

        print(numbers)
```

[20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]

4) take Cube of odd values between 20 to 4

```
In [10]: cubes = []
         for num in range(19, 3, -2): # Start from 19 (odd), go down to 5, step by -2
             cubes.append(num ** 3)

         print(cubes)
```

[6859, 4913, 3375, 2197, 1331, 729, 343, 125]

5) take 5 freinds name in list name=[a,b,c,d,e] take corresponding ages  
in second list age = [20,21,23,25,24]

```
In [11]: names = ["a", "b", "c", "d", "e"]
         ages = [20, 21, 23, 25, 24]

         for name, age in zip(names, ages): # zip(names, ages) pairs up the element
             print(f"My name is {name}, my age is {age}")
```

My name is a, my age is 20  
My name is b, my age is 21  
My name is c, my age is 23  
My name is d, my age is 25  
My name is e, my age is 24

In [ ]: