

# Lecture Notes:Week 2

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## Printing Statements Using Python[\[edit\]](#)

*Example :*

```
a = 1
print (a)
```

*OUTPUT : 1*

## Additions / subtractions [\[edit\]](#)

*Example :*

```
a = 1
```

```
b = 2  
sum = a + b  
print (sum)
```

*OUTPUT: 3*

## Print the sum of a and b without using variable sum [\[edit\]](#)

*Example :*

```
a = 1  
b = 2  
print (a + b)
```

*OUTPUT: 3*

## Taking Inputs From User[\[edit\]](#)

*Example :*

```
a = input() #returns a as a string  
a = int (a) #converts a to integer  
a = a + 1   # increments a by 1  
print (a)   #prints the value of 'a'
```

*OUTPUT:*

```
input : 2  
output : 3
```

### ***Example 2 : Taking input as integer***

```
a = int (input())  
print (a)
```

#### ***OUTPUT:***

```
user input : 3  
output : 3
```

---

## **Discount Calculation**[\[edit\]](#)

### ***Example :***

```
a = int(input ("Enter the Price in Rupees : "))  
print ("Price before discount : ", a, "Rs.")  
print ("Discount = 10%")  
print ("Price after discount =", 0.9 * a, "Rs.")
```

#### ***OUTPUT:***

```
Enter the Price in Rupees : 1000                                #user input  
Price before discount : 1000 Rs.  
Discount = 10%  
Price after discount = 900.0 Rs.
```

## If Condition[\[edit\]](#)

*Example :*

```
a = 1
b = 3
if (a > b):
    print (a)
else:
    print (b)
```

*OUTPUT:*

```
3 ( since b > a )
```

## Ending a Statement Without Newline[\[edit\]](#)

*Example :*

```
a = "Harsha Teja"
print (a,end = "")
print (" 123")
```

*OUTPUT:*

```
Harsha Teja 123
```

## LOOPS: Learning how to use *for loop* [ *for i in range() :* ][\[edit\]](#)

*Example :*

```
sum = 0
for i in range(5):
    print ("The value of i is ",i)
    sum = sum + i
    print ("The sum of first",i,"natural numbers is :",sum )
```

#### OUTPUT:

```
The value of i is  0
The sum of first 0 natural numbers is : 0
The value of i is  1
The sum of first 1 natural numbers is : 1
The value of i is  2
The sum of first 2 natural numbers is : 3
The value of i is  3
The sum of first 3 natural numbers is : 6
The value of i is  4
The sum of first 4 natural numbers is : 10
```

Syntax explanation:-- for i in range(i initialization, iterations(or end value of i),increment/decrement):[\[edit\]](#)

#### 1. **for i in range(2):**

In this case you only provide the iterations value. So by default **i** is initialized to **0**.  
Number of iterations will be 2(i.e, 0 and 1.It always excludes the last number written.  
Like for this case,iterations proceed for values of **i** as 0,1 and not 0,1,2.).  
Default increment/decrement value is 1.

## 2. `for i in range(1,3):`

Here `i` is initialized to `1`. Number of iterations will be 2 (i.e, 1 and 2).

It always excludes the last number written.

Like for this case, iterations proceed for values of `i` as 1, 2 and not 0, 1, 2.).

Again default increment/decrement value is 1.

## 3. `for i in range(1,6,2):`

This states that `i` is initialized to `1`. Number of iterations will be 3 (i.e, `i` will assume the values 1, 3 and 5.) values of `i` jumps by difference of 2.

## Taking multiple Integer inputs from the user in a single line [\[edit\]](#)

### Example :

```
a , b = [int(a) for a in input("Enter 2 values and separate them with a space : ").split()] #split() helps to
separate
the values if it encounters a space in between them.
```

```
print("The first value given was",a,"and next was",b)
```

Note:-We can also use `raw_input()` instead of `input()`. but in python3 we use `input()`.

### OUTPUT:

```
Enter 2 values and separate them with space : 17 25      #user input
```

```
The first value given was 17 and next was 25
```

1.

1. this can also be done by following command

```
a,b=map(int,input().split())
```

OR

```
a,b=input().split();a=int(a);b=int(b)
```

Another way of taking many integer inputs in a single line:[\[edit\]](#)

```
integers = list(map(int,input().split()))
```

```
print(integers)
```

**Printing list:A NEW Way**[\[edit\]](#)

***Example 1:***

```
list1=[1,2,3]
```

```
print(*list1)
```

*OUTPUT: 1 2 3*

***Example 2:***

```
list2=[3,4,5]
```

```
print(*list2,sep=',')
```

*OUTPUT: 3,4,5*