

## if statement

“if” keyword represents conditional statement in python

Types of if statements

1. simple if
2. if..else
3. if..elif..else (if..else ladder)
4. nested if

### Simple if

If without else is called simple if.

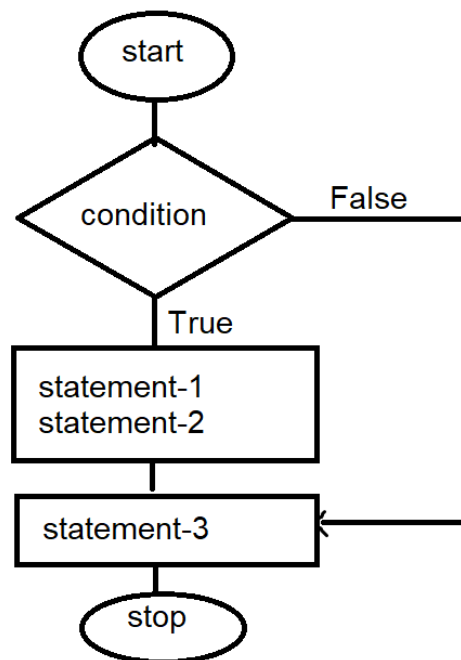
This syntax is having only if block.

#### Syntax:

```
If <condition>:  
    Statement-1  
    Statement-2  
Statement-3
```

If condition is True, PVM executes Statement-1, Statement-2 and Statement-3

If condition is False, PVM executes Statement-3



All the statements, within block must be at same indentation level.

#### Example:

```
if 10>2:  
    print("Hello")
```

```
if 2>10:  
    print("Bye")
```

```
if 10>5:  
    print("Hello")  
    print("Bye")  
    print("Python")
```

**Output:**

Hello  
Hello  
Bye  
Python

**Example:**

```
if 10>2:  
    print("Hello")
```

```
print("Bye")  
print("Python")
```

**Output:**

Hello  
Bye  
Python

**pass keyword**

when include pass inside a block, it does not perform any operation.

pass means do nothing or null operation.

In python empty blocks are defined including "pass" keyword.

**Example:** if, else, while, for, function, class

**Example:**

```
if True:  
    pass
```

```
if False:  
    pass
```

```
print("Hello")  
print("Bye")
```

**Output:**

```
Hello  
Bye
```

**Example:**

```
if 10>2:print("Hello");print("Python");print("Django")  
if 2>10:print("Bye")
```

**Output:**

```
Hello  
Python  
Django
```

**if..else**

This syntax is having two blocks,

1. if block (True Block)
2. else block (False Block)

If <condition>:

Statement-1

Statement-2

else:

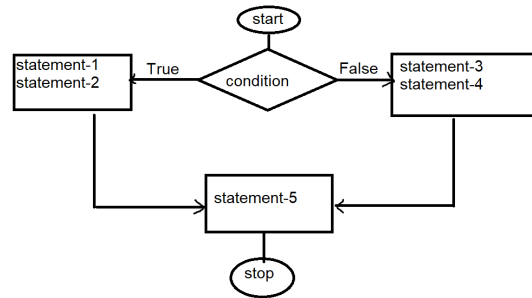
Statement-3

Statement-4

Statement-5

If condition is True, PVM executes  
Statement-1, Statement-2 and  
Statement-5

If condition is False, PVM  
executes  
Statement-3, Statement-4 and  
Statement-5



### Example:

if 10>2:

print("Hello")

else:

print("Bye")

if 2>10:

print("Hello")

else:

print("Bye")

### Output:

Hello

Bye

**Example:**

# Write a program to find a person is elg to vote or not

```
name=input("Enter name ")
age=int(input("Enter age "))
if age>=18:
    print(f'{name} is elg to vote')
else:
    print(f'{name} is not elg to vote')
```

**Output:**

```
Enter name naresh
Enter age 40
naresh is elg to vote
```

```
Enter name suresh
Enter age 12
suresh is not elg to vote
```

**Example:**

# Write a program to find input number is even or odd

```
num=int(input("Enter any number "))
r=num%2
if r==0:
    print(f'{num} is even')
else:
    print(f'{num} is odd')
```

**Output:**

```
Enter any number 5
```

5 is odd

Enter any number 4

4 is even

**Example:**

# Write a program to find number input by user is divisible with 7

```
num=int(input("Enter any number "))
```

```
r=num%7
```

```
if r==0:
```

```
    print(f'{num} is divisible with 7')
```

```
else:
```

```
    print(f'{num} is not divisible with 7')
```

**Output:**

Enter any number 21

21 is divisible with 7

Enter any number 23

23 is not divisible with 7

**Example:**

# Write a program to display "Hello" if a number entered by user is multiple of five

# otherwise print "Bye"

```
num=int(input("Enter any number "))
```

```
r=num%5
```

```
if r==0:
```

```
    print("Hello")
```

```
else:  
    print("Bye")
```

### Output:

Enter any number 25  
Hello

Enter any number 23  
Bye

### If..elif..else (if..else ladder)

This syntax allows building multiple conditions or checking multiple conditions.

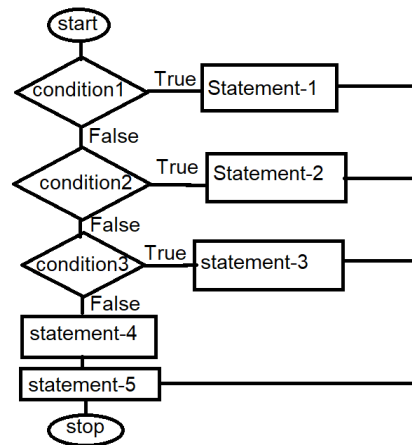
#### Syntax:

```
If <condition1>:  
    Statement-1  
elif <condition2>:  
    Statement-2  
elif <condition3>:  
    Statement-3  
...  
else:  
    Statement-4  
Statement-5
```

...

```
else:  
    Statement-4  
Statement-5
```

If condition1 is True, PVM  
executes Statement-1 and  
Statement-5



<p>If condition1 is False and condition2 is True, PVM execute Statement-2 and Statement-5</p> <p>If condition1, condition2 are False and condition3 is True, PVM executes Statement-3 and Statement-5</p> <p>If all conditions are False, PVM executes statement-4 and statement-5</p>	
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### **Example:**

```
if 10>2:
    print("A")
elif 10>5:
    print("B")
elif 10>8:
    print("C")
```

```
if 10>20:
    print("A")
elif 10>5:
    print("B")
elif 10>8:
    print("C")
```

```
if 10>20:
    print("A")
elif 10>30:
    print("B")
elif 10>8:
```



```
print("C")
```

```
if 10>20:  
    print("A")  
elif 10>30:  
    print("B")  
elif 10>40:  
    print("C")  
else:  
    print("D")
```

**Output:**

A  
B  
C  
D