

# if else Statement

Decision making is about deciding the order of execution of statements based on certain conditions or repeat a group of statements until certain specified conditions are met.

The if statement in Python is used to perform operation on the basis of condition. By using if-else statement, you can perform operation either condition is true or false.

There are many ways to use if statement in Python:

- If statement
- If-else statement
- Nested if Statement

## If Statement

The single if statement in Python is used to execute the code if condition is true. The syntax of if statement is given below.

<pre>if expression:     statement</pre>
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The expression is true, then 'statement' will be executed, otherwise 'statement' is skipped.

## Example

Example	Output
<pre>a=input("enter value of a") if a&gt;10:     print "value of a is greater than 10" if a&lt;10:     print "value of a is less than 10"</pre>	<pre>enter value of a 20 value of a is greater than 10</pre>

## If-else Statement

The if-else statement in Python is used to execute the code if condition is true or false. The syntax of if-else statement is given below.

```
if expression:
    #statement-block1
else:
    #statement-block2
```

If the 'expression' is true, the 'statement-block1' is executed, else 'statement-block1' is skipped and 'statement-block2' is executed.

Example	Output
<pre>a=input("enter value of a") if a&gt;10:     print "value of a is greater than 10" else:     print "value of a is less than 10"</pre>	<pre>enter value of a 20 value of a is greater than 10</pre>

# elif statement

The elif statement enables us to check multiple conditions and execute the specific block of statements depending upon the true condition among them.

```
If expression1:
    #statement-block1
elif expression2:
    #statement-block2
elif expression3:
    #statement-block3
else:
    #statement-block4
```

If the 'expression' is true, the 'statement-block1' is executed, else if 'expression2' is true then 'statement-block2' is executed, else if 'expression3' is true then 'statement-block3' is executed otherwise 'statement-block4' is executed.

Example	Output
a=input("enter value of a") b=input("enter value of b") if a>b: print "value of a is greater than b" elif a<b:	enter value of a 10 enter value of b 20 a is equal to b

<pre> print "value of a is less than b" else:     print "a is equal to b" </pre>	
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## Nested if

The syntax for a **nested if** statement is as follows

<pre> if expression1:     statement-block1     if expression2:         statement-block2     else:         statement-block3 else:     statement-block4 </pre>
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Example	Output
<pre> a=input("enter value of a") if a&lt;100:     if a&gt;50:         print "value of a is greater than 50"     else:         print "value of a is less than 50" else:     print "value of a is greater than 100" </pre>	<pre> enter value of a 102 value of a is greater than 100 </pre>