

Conditionals



Introduction to Conditionals

What are Conditionals?

Conditionals are expressions that evaluate to either true or false.

Why we need conditions?

In program sometimes flow needs to take decisions based on checks and conditions i.e. we want our program to perform a set of actions in case A, but perform another set of actions in case B.

Conditions offered in Python

- Simple Condition
- Simple if Condition
- If –else Condition

Conditions Elaborated

Simple Condition These conditions results in either True or False.

- `>> 3>5`
`>> x = 10`
`x < 11`

if condition if statement selects actions to perform

- `if test :`
`statements`

if –else condition else block come into existence when if condition fails.

- `if test :`
`statements1`
`else:`
`statements2`

Python's Statements Syntax

What Python Removes

Parenthesis are optional.

```
If (x<y)
or
If x<y
```

End-of-line is end of statement.

```
X = 1;
or
X = 1
```

End of indentation is end of block.

```
If (x>y)
{
x=1;
y=2;
}
```

What Python Adds

Colon character(:)

```
if x>y:
x=2
y=1
```

Indentation

```
if x>y:
x=2
y=1
```

Why Indentation Syntax ?

C like language

```
If (x)
    If (y)
        Statement1;
else
    Statement2;
```

Python

```
If x:
    If y:
        Statement1
else:
    Statement2
```

Python is a **WYSIWYG** language-**What You See Is What You Get.**

Multiway Branching

When more than two conditions are to be checked then addition of *elif* block is necessary.

```
If test1:
    statements1
elif test2:
    statements2
elif test3:
    statements3
else :
    statements4
```

```
>>>x = 'eggs'
>>>if x == 'spam' :
        print "shave and a haircut"
elif x == 'bugs' :
        print "what's up doc?"
else :
        print 'Run away! Run away'
>>> 'Run away! Run away'
```




Hands-On

