

02.14-if-statement

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1

1.1

```
In [1]: x = 0.5
        if x > 0:
            print ("Hey!")
            print ("x is positive")
```

```
Hey!
x is positive
```

```
x > 0 False print
if CJavaPython {} if Python ()
```

```
print "Hey!"
print "x is positive"
```

```
if
```

```
x > 0
```

```
In [2]: x = 0.5
        if x > 0:
            print ("Hey!")
            print ("x is positive")
            print ("This is still part of the block")
        print ("This isn't part of the block, and will always print.")
```

```
Hey!
x is positive
This is still part of the block
This isn't part of the block, and will always print.
```

```
x < 0
```

```
In [3]: x = -0.5
        if x > 0:
            print ("Hey!")
            print ("x is positive")
            print ("This is still part of the block")
        print ("This isn't part of the block, and will always print.")
```

This isn't part of the block, and will always print.

```
if
if :

if <condition 1>:
    <statement 1>
    <statement 2>
elif <condition 2>:
    <statements>
else:
    <statements>

1 if 1 elif 2 elif else
```

```
In [4]: x = 0
        if x > 0:
            print ("x is positive")
        elif x == 0:
            print ("x is zero")
        else:
            print ("x is negative")
```

x is zero

```
elif 1
else 1
and or, not
```

```
In [5]: x = 10
        y = -5
        x > 0 and y < 0
```

Out[5]: True

```
In [6]: not x > 0
```

Out[6]: False

```
In [7]: x < 0 or y < 0
```

```
Out[7]: True
```

```
4100400
```

```
In [8]: year = 1900
        if year % 400 == 0:
            print ("This is a leap year!")
        #
        elif year % 4 == 0 and year % 100 != 0:
            print ("This is a leap year!")
        else:
            print ("This is not a leap year.")
```

```
This is not a leap year.
```

1.2

Pythonif

TrueFalse

- False
- None
- 0
-

```
In [9]: mylist = [3, 1, 4, 1, 5, 9]
        if mylist:
            print ("The first element is:", mylist[0])
        else:
            print ("There is no first element.")
```

```
The first element is: 3
```

```
In [10]: mylist = []
         if mylist:
             print ("The first element is:", mylist[0])
         else:
             print ("There is no first element.")
```

```
There is no first element.
```

```
if len(mylist) > 0:
```