

گزاره‌های if، elif و else

گزاره `if` در پایتون اجازه می‌دهد به ما که به رایانه خود بگوییم که یک عملیات جایگزین بر اساس یک مجموعه شروط انجام دهد. مثلاً به رایانه خود بگوییم: اگر فلان اتفاق افتاد، فلان کار را انجام بده!

ما می‌توانیم این ایده را به عبارت‌های `elif` و `else` نیز تعمیم دهیم، که در این صورت به رایانه خود می‌گوییم: اگر این مورد اتفاق افتاد یکسری کار انجام بده، و اگر مورد دیگری اتفاق افتاد، کارهای دیگری را انجام بده، و اگر هیچکدام از این‌ها پیش نیامد، برو سراغ کارهای دیگری.

```
if case1:
    perform action1
elif case2:
    perform action2
else:
    perform action3
```

First Example

Let's see a quick example of this:

```
In [2]: if False:
        print('It was true!')
```

Let's add in some else logic:

```
In [4]: x = False

if x != False:
    print('x was True!')
else:
    print('I will be printed in any case where x is not true')
```

I will be printed in any case where x is not true

Multiple Branches

Let's get a fuller picture of how far `if`, `elif`, and `else` can take us!

We write this out in a nested structure. Take note of how the `if`, `elif`, and `else` line up in the code. This can help you see what `if` is related to what `elif` or `else` statements.

We'll reintroduce a comparison syntax for Python.

```
In [7]: loc = 'Auto Shop'

if loc == 'Auto Shop':
    print('Welcome to the Auto Shop!')
elif loc == 'Bank':
    print('Welcome to the bank!')
else:
    print('Where are you?')
```

Welcome to the Auto Shop!

Note how the nested `if` statements are each checked until a True boolean causes the nested code below it to run. You should also note that you can put in as many `elif` statements as you want before you close off with an `else`.

Let's create two more simple examples for the `if`, `elif`, and `else` statements:

```
In [8]: person = 'Sammy'

if person == 'Sammy':
    print('Welcome Sammy!')
else:
    print("Welcome, what's your name?")
```

Welcome Sammy!

```
In [9]: person = 'George'

if person == 'Sammy':
    print('Welcome Sammy!')
elif person == 'George':
    print('Welcome George!')
else:
    print("Welcome, what's your name?")
```

Welcome George!

```
In [12]: x = 10
if x < 20:
    print('x < 20')
elif x % 2 == 0:
    print('x is even')
elif x == 10:
    print('x is 10')
else:
    print('None of above happened!')
print("Now I'm out of statement")
```

x < 20
Now I'm out of statement

```
In [13]: x = 10
if x < 20:
    print('x < 20')
if x % 2 == 0:
    print('x is even')
if x == 10:
    print('x is 10')

print("Now I'm out of statement")
```

```
x < 20
x is even
x is 10
Now I'm out of statement
```