

Theory: Else statement

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§1. Simple if-else

An **if-else statement** is another type of conditional expressions in Python. It differs from an **if statement** by the presence of the additional keyword `else`. The block of code that `else` contains executes when the condition of your if statement does not hold (the Boolean value is `False`). Since an else statement is an alternative for an if statement, only one block of code can be executed. Also, `else` doesn't require any condition:

```
1 | if today == "holiday":
2 |     print("Lucky you!")
3 | else:
4 |     print("Keep your chin up, then.")
```

Note that the 4-space **indentation** rule applies here too.

As you may soon find out, programmers do like all sorts of shortcuts. For conditional expressions there's a trick as well – you can write an if-else statement in one line. This is called a **ternary operator** and looks like this:

```
1 | print("It's a day now!" if sun else "It's a night for sure!")
```

Or, more generally:

```
1 | first_alternative if condition else second_alternative
```

It's a matter of convenience, but remember that the code you create should still be readable.

§2. Nested if-else

It should be mentioned, that `if-else` statements can be **nested** the same way as `if` statements. An additional conditional expression may appear after the `if` section as well as after the `else` section. Once again, don't forget to indent properly:

```
1 | if x < 100:
2 |     print('x < 100')
3 | else:
4 |     if x == 100:
5 |         print('x = 100')
6 |     else:
7 |         print('x > 100')
8 |     print('This will be printed only because x >= 100')
```

Now you are ready not only to set conditions but also to consider different alternatives. Congratulations!

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[Docstrings](#) ...

[Working with CSV](#) ...

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[How to read a traceback](#) ...

Table of contents:

[↑ Else statement](#)

[§1. Simple if-else](#)

[§2. Nested if-else](#)

[Feedback & Comments](#)

[Comments \(8\)](#)

[Hints \(0\)](#)

[Useful links \(2\)](#)

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