

0409 Paper - Operators and List

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1 Operators and Lists

We can use **in** to check if an element is contained in another element.

1.0.1 The in-Operator and Lists

There are also operators for lists; for example, we can use the **in** operator to check whether an element is contained in a list.

Formally, the syntax looks like this: **element in list**

```
In [2]: students = ["Max", "Monika", "Erik", "Franziska"]
```

```
print("Monika" in students)
print("Moritz" in students)
```

```
True
False
```

The result of such a query is a Boolean, i.e. the value is either True or False. This allows us to use expressions with the in operator in if-else structures:

```
In [3]: if "Monika" in students:
        print("Yes, Monika studies here!")
        else:
            print("No, Monika doesn't study here!")

        if "Moritz" in students:
            print("Yes, Moritz studies here!")
        else:
            print("No, Moritz doesn't study here!")
```

```
Yes, Monika studies here!
```

```
No, Moritz doesn't study here!
```

1.0.2 The in operator and strings

In fact, the in operator can also be applied to strings. For example, we can check whether a letter or character is contained in a word, or a word in a sentence, etc.

```
In [4]: sentence = "Yes, Monika studies here!"
```

```
if "!" in sentence:
    print("YES")
else:
    print("NO")
```

YES

```
In [5]: word = "Studies"
```

```
if "ies" in word:
    print("YES")
else:
    print("NO")
```

YES

1.0.3 Why don't you play around with what you've learned a little bit?

- Check some strings with the in operator! :-)

```
In [ ]:
```