

Variables

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1 Variables

variables are a generally essential concept of programming languages. You can think of a variable as a kind of container in which you can, for example, store a number for later reuse.

In Python you can introduce a variable and assign a value to it by writing: **variableName = number**

Note that a variable name may **not** start with a number!

In concrete terms, the definition of a variable can look something like this:

```
In [2]: a = 5
```

Instead of a value, there may also be an calculation to the right of the equals sign that returns a number as the result:

```
In [1]: a = 5 + 6
```

At another place in the program you then access the number via the variable name. You can use the variable in a `print()` function, for example:

```
In [5]: print(a)
```

```
11
```

You can also calculate with variables in which numbers are stored:

```
In [11]: print(a * a)
```

```
121
```

```
In [4]: b = 5  
        print(b * b * b)
```

```
125
```

```
In [2]: # calculate the average age
```

```
age = 21  
age2 = 18  
  
print((age + age2) / 2)
```

19.5

```
In [5]: # Instead of calculating in print(), we can cache the result in a variable
```

```
average_age = (age + age2) / 2
```

```
In [4]: print(average_age)
```

19.5

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

- Output some calculation results by print(), but save numbers and partial results in variables! :-)

```
In [ ]:
```