Overview of the programming languages (2020)

This article is intended to give you an overview of the different programming languages and to show you that the programming languages themselves are not that different. The most common programming languages are briefly presented and explained here; these were taken from the so-called TIOBE index , which measures the popularity of programming languages. Which programming language should start with is not recommended here, even if there is a clear favorite. In this article you can read which one it is and why.

Programming languages in 2020

The following programming languages are briefly explained here:

- Javascript
- Java
- C and C ++
- C # (C Sharp)
- PHP
- Python
- HTML & CSS (beware of haters!)

The explanation briefly introduces the language and explains what can be programmed with the respective languages.

This should give you a **good overview** and find the r**ight programming language** for your implementation here.

You will also get a micro-insight into what this language actually looks like, so you will quickly notice that most languages are quite similar.

Few languages look completely different. The example that is used is of course not a functional program, it is only intended to provide an excerpt for understanding. But it contains all the basic elements that a modern programming language contains, these basic elements would be:

1. Functions / methods
2. Variables / objects
3. Commands / instructions
4. Operators
5. decisions
6. grind
7. comment

If you don't understand these, no problem. You will learn these later anyway, no matter what language you start in.

***ATTENTION*: Do not choose the language because of the appearance! Choose the language that is most useful to you and with which you can gain long experience. With enough experience, switching to another programming language will be very easy for you.**

Javascript

Probably the best known language for web applications is Javascript . This language can be used not only to program dynamic websites, but also to create real applications and even games.

A huge advantage is that Javascript does not require any additional programs, because it can simply be executed in any common Internet browser. There is also another strength:

Since Javascript can be executed in the browser, it can also be used to program apps for mobile devices. The Javascript program is simply started within a browser that the user cannot see.

So it seems that a normal app is being used and this app runs just as well on Android and iOS at the same time. The best part is that it saves you double programming work. So this language is actually the favorite for everyone who wants to create as many different computer programs as possible.

For beginners there is the beginners course, which shows the beginnings of programming in Javascript. Click here to learn Javascript programming. This is a program excerpt from Javascript:

```
function findData() {
    var data = loadData();
    while(data.present == true) {
        if (data.correct == true) {
            return data;
        }
    }
    return noData ();
}
```

Java

This programming language has established itself on millions of computers and devices.

Java is platform-independent, which means it runs just as well on Windows as it does on Linux or Mac OSX. Android also uses this programming language. So you can program applications, apps and games with Java.

Java is a very modern programming language and always includes the latest technical concepts from software development. What is unfortunately missing in the mobile area is mostly the support for Apple devices, so that you have to write separate source code for it.

This language is therefore best suited for the backend area in large web applications. If you get stuck with Javascript, you should definitely take a look at Java.

Here is a java code snippet:

```
class DataFinder extends DataLoader {
    public object findData () {
        object data = loadData();
        while(data.present == true) {
            if (data.correct == true) {
```

```
            return data;
            }
        }
        return noData ();
    }
}
```

C and C ++

C and C ++ are the veterans in this collection of programming languages.

Almost all of today's operating systems have their origin in C, even today we still program in C and C ++ and the code still runs in our operating systems. C ++ is the extension of C to include the object-oriented approaches. In C ++ it is possible to use classes and objects.

C and C ++ are suitable for hardware-related programming, as these languages are translated into machine code. Operating systems, applications and games can be implemented with these languages and are very high-performance. Since you sometimes have to take care of memory handling and access yourself, it can be a bit complicated for beginners.

Here is an example in C (C ++ is similar):

```
#include "stdio.h"
#include "data.h"

Data findData(void) {
    data data = loadData();
    while(data.present == true) {
        if (data.correct == true) {
            return data;
        }
    }
    return noData ();
}
```

PHP

PHP is a language used in connection with website programming. The main purpose of PHP is to display a website and everything that happens in the background on the web server (so-called backend).

Here you can use the PHP program to influence which part and content of the website should be displayed. The PHP program is always started on the web server on which the website is hosted.

Particularly popular: Queries on databases in order to display certain data on a website. In connection with Javascript / HTML / CSS PHP is a very powerful language.

The code looks like this in PHP:

```
function findData() {
    $data = loadData();
    while(data.present == true) {
        if (data.correct == true) {
            return data;
        }
    }
    return noData ();
}
```

Phyton

Python is very popular with beginners and arose from a hobby project. The name is not based on the type of snake, but on the comedian Monthy Python.

With Python you can write a lot of scripts up to and including full web servers. The extent to which the programs can be executed on different platforms depends on whether there is an executable Python version on the respective device and operating system.

Here is the code snippet for Python:

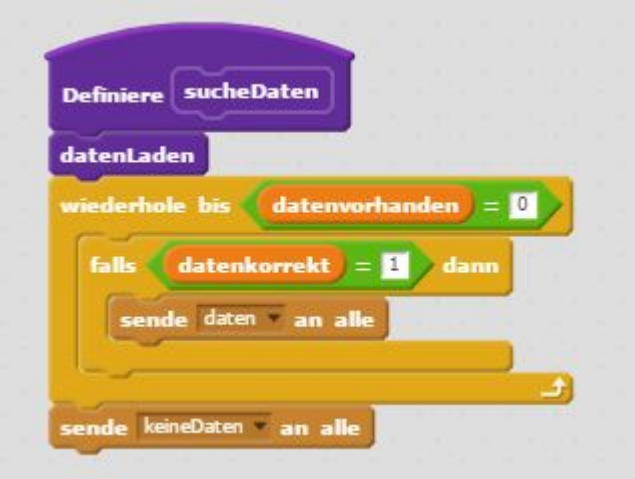
```
def findData ():
    def data = loadData ()
    while data.present == True:
        if data.correct == True:
            return data
        else :
            return noData ()
```

Scratch

You just got a shock with the other languages because they are so text-heavy?

Okay, there is at least a little remedy for that too. Scratch is a language that is used purely to learn programming and was specially developed for children and young people.

Logically only relatively small projects can be created with it, but they are inspiring. Small games, mini-films and even the control of LEGO robots, for example, are possible. For an example of how to create a game in Scratch, check out our free Scratch tutorial. The language looks something like this (and the example program no longer makes any sense here):



HTML & CSS

These languages are actually not programming languages, but are often mentioned together with other programming languages.

These are important if you want to create websites and web applications. With HTML you describe the structure and content of your website and with CSS (Cascading Style Sheets) you determine how this HTML structure should be displayed.

If you want to start programming websites, the point you have to tackle is HTML and CSS. Obviously the example program cannot be shown in HTML / CSS.

PYPL PopularitY of Programming Language

~~Germany~~ **Worldwide**, Mar 2021 compared to a year ago:

Rank	Language	Share	Trend
1	Phyton	30,17%	-0,2%
2	Java	17,18%	-1,2%
3	JavaScript	8,21%	+0,2%
4	C#	6,76%	-0,6%
5	C/C++	6,71%	+0,8%
6	PHP	6,13%	+0,0%
7	R	3,81%	+0,0%
8	Objective-C	3,56%	+1,1%
9	Swift	1,82%	-0,4%
10	MatLab	1,80%	-0,0%