



## **PERFORMING AN ARITHMETIC OPERATION IN THE PYTHON PROGRAMMING LANGUAGE**

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<b>ABSTRACT</b>	<b>KEYWORDS</b>
The creation of the Python programming language began in the early 1990s. At that time, Guido van Rossum, an employee of the Dutch CWI Institute, who was not well known, participated in the project of creating the ABC language. ABC was a language designed to teach students basic programming concepts instead of Basic. One day, Guido got tired of this work and spent 2 weeks writing an interpreter for another simple language on his Macintosh, during which he definitely absorbed some ideas of the ABC language.	Python programming language, Internet, Macintosh, computer, information technology

### **Introduction**

Also, Python adopted many features of Algol-68, C, C++, Modul3 ABC, and SmallTalk languages that were widely used in the 1980s and 1990s. Guido van Rossum started spreading this language on the Internet. At this time, until 1996, a man named Steve Mayewski was famous on the Internet for his web page "Comparative Review of Programming Languages". [1] He also liked the Macintosh, and this brought him closer to Guido. At the time, Guido was a fan of the BBC comedy Monty Python's Air Circus and named the language he created Python after Monty Python (not after the snake). The language quickly became popular. The number of users who are interested in and understand this programming language has increased. In the beginning it was a very simple language. Just a small interpreter had several functions. In 1991, the first OYD (Object Oriented Programming) tools appeared. After some time, Guido moved from Holland to America. He was invited to work for an NRI corporation. He worked there and wrote Python for corporate projects and developed an interpreter for the language in his spare time. This continued until 1990, when Python version 1.5.2 appeared.

Most of Guido's time was spent creating projects for the corporation, which he did not like. Because he was running out of time to develop the Python programming language. Then he looked for a sponsor who could give him an opportunity to develop the language, and he was supported by the company BeOpen, which had just been founded at that time. He left CNRI, but under contract 8 he was obliged to release version 1.6 of Python. At BeOpen, he released Python 2.0. Version 2.0 was a big step forward. The most important thing in this version is that the development process of the language and the interpreter was open. Thus, version 1.0 was released in 1994, version 2.0 was released in 2000, and version 3.0 was released in 2008. Currently, the third version is widely used. Python programming language capabilities Python is one of the few modern programming

languages that is easy to learn and at the same time has high capabilities. Python provides high-level data structures and simple but efficient object-oriented programming styles.[2]

What makes Python unique.

1. Simple, easy to learn, simple syntax, easy to start programming, free and open source software.
2. While writing the program, it is not necessary to take into account lower level details, for example memory management.
3. Can work on many platforms without any modifications.
4. Language to be interpreted.
5. Language prone to expansion. If we want the program to work somewhere faster, we can write this part in C or C++ programming languages and then run (call) this part through python code.
6. It has many different libraries.
7. Working with xml/html files
8. Working with http requests
9. GUI (graphical interface)
10. Creating websites
11. Working with FTP
12. Working with picture audio video files
13. In robotics
14. Programming of mathematical and scientific calculations [3]

Python can be used in large projects. Because there is no limit to it, the possibilities are high. It is also the best among programming languages due to its simplicity and universality.

Arithmetic operations and assignment operator. A very wide set of operations is defined in the PYTHON language for data processing. An operation is an operation that is performed on one (unary) or two (binary) operands, and the result of the calculation is its return value. Basic arithmetic operations include addition (+), subtraction (-), multiplication (\*), division (/), exponentiation (\*\*), and subtraction (%). possible To acquire values returned by operations, the assignment operation (=) and its various modifications are used: addition, with assignment (+); subtraction, giving a value (-); multiplication by giving a value (\*); to be, to give value (/); get the remainder of the division, giving a value (%) and others. Let's focus on their general appearance. Logical operations with discharge. Programming experience shows that flags that take values of 0 and 1 are usually used to indicate whether a condition has occurred in solving a given problem. One or more byte variables can be used for this purpose. For example, a bool variable can be used for this purpose. Alternatively, byte discharges can also be used as flags. Because discharges accept only two values - 0 and 1. Since there are 8 bits per byte, it can encode 8 flags.

Logical operations on byte arrays.

Content of Actions.

And or & Logical AND (multiplication) Xor or | Logical or (add) Or or ^ Exclusive OR

It is possible to display the results of execution of logical operations with a discharge in the form of a table.

```
A V A&V A|V ^V
0 0 0 0
0 1 0 1
1 0 0 1
1 1 1 0
```

## Conclusion:

Usually, in order to conduct the study of various problems, issues or processes that occur in nature or society with the help of a computer, first of all, it is necessary to see the mathematical expression of the considered problem, process - object, that is, the mathematical model. [4] Creating a mathematical model of the object under consideration is a very complex process, depending on the object being studied, the participation of experts in various fields is required. In general, solving a problem with the help of a computer can be divided into the following stages. To solve the given linear problem on a computer, it is necessary to first create its mathematical model, then its algorithm and program. Any complex algorithm can be described using three basic structures. These are sequence, branch and repeat structures. Algorithms of linear, branching and repetitive calculation processes can be created based on these structures.

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