

notes

P 1.0

Creating computer programs in Python



Beginner level

Materials prepared by the department
of methodological development department



Python is a programming language consisting of commands.

If we want the computer to do something, we have to write code made up of commands that the computer has to execute.

A **variable** is a cell in computer memory that we can name, write something to, and then retrieve that data. Variables are used to store information in a program.

We can give any name to variables, but it is desirable that from the name, it is clear what the variable stores. The name of a variable should not be the same as the name of a function (for example, you can't name a variable **print** or **if**). The names of variables are written with a small letter and an underscore between them if the variable name consists of two or more words.

The **data type** defines what exactly the data are data, how they are stored in memory, what operations with them can be performed on it.

Libraries are collections of ready-made commands.

Random is a library which contains commands for getting random values. They must be imported before they can be used.

```
print (5)
```

Printing the number

```
print (5 + 5)
```

Printing the sum of numbers

```
print ('hello world')
```

Printing the string

```
print ( 'hello world'+ 'from John')
```

String addition (Concatenation)

```
name = 'John'
```

Creating a variable

```
user name = input ('Enter your name')
```

Entering a value from the keyboard

```
if secret_number > user_number:  
    print ('Secret number is greater than your')
```

Creating a condition, the command inside will only be executed if the first variable is greater than the second

```
if secret_number < user_number:  
    print ('Secret number is less than your')
```

Creating a condition, the command inside will only be executed if the first variable is less than the second

```
if secret_number == user_number:  
    print ('You won')
```

Creating a condition, the command inside will only be executed if the variables will be equal to

```
import random
```

Connecting the library

```
secret_number = random.randint (1, 10)
```

Creating a random number from 1 to 10

```
while attempts > 0:
```

Creating a loop with a condition

```
break
```

Exit loop operator

```
int(user_number)
```

Conversion to a number

```
str(user_number)
```

Conversion to string