notes P 1.6

Creating computer programs in Python

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Beginner level

Materials prepared by the department
of methodological development department

Functions

A function is your own subprogram that executes a specific set of commands. To create a function, you need to write the keyword def (define) and the function name after it. The function name must follow the same rules as the variable name.

After the function name it is obligatory to put parentheses and in them list the parameters the function must accept. If the function accepts nothing, the parentheses will be empty.

After the parentheses we write a colon (:), just like after conditions and loops.
And on the next line, with an indent of 4 spaces you can write the code that the function should execute.

You can not only pass a value to a function, but you can also return some data from it to the place of call. The command return is used for this purpose. Important: return terminates the function, so code written afterwards will not work.

For the function to work, it must be called. To do this, just write the function name in the right place of the program and put parentheses after it. It is important: if it was specified when creating the function that it accepts some parameters, then when you call it, you must pass the values corresponding to these parameters.

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A lambda function is a special function without a name that can be written in a variable. To create such a function, we need to write the keyword lambda, list the parameters it accepts separated by commas (brackets are not needed here) and put a colon (:). After a colon we write some action (a lambda-function performs only one action) and its result will be returned into the program. The return command is not needed here.

An example of creating and calling a lambda function, written in a mult variable, that takes numbers a and b and returns their product:

```
mult = lambda a, b: a * b
```

```
mult (5,7) #35
```

```
def function_name ():
```

Creating a function

```
return
```

The command that returns values from a function, it also stops the function

```
def mult (a, b):
```

Creating a function mult that takes two parameters

```
mult = lambda a, b: a * b
```

Creating a lambda function and writing it to the variable mult