How to start a script on python

Statistics Assignment

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The novice developer on Python, in addition to the syntax and basic rules for using the operators of this language, should be able to run the code for execution.After all, it is possible to understand whether the script written you written is written, or it contains errors.Consider in more detail how you can run scripts in the operating system terminal, in an integrated development environment or simply from the OS interface.This will allow you to choose the appropriate option and improve the efficiency of your work.Interpreter python

The programming language under consideration is one of the most progressive current.It allows you to quickly and effectively solve problems in a wide variety of areas.However, the term Python also understands the interpreter, that is, a program on a computer that allows you to run on execution written scripts.It is an additional software layer between PC hardware and code.

There are several interpreters:

written in programming language with;

written in java programming language;

written in Python;

Programs implemented in the .NET environment.

Selecting a specific option for the end user does not matter.Regardless of the type of program, the written code will be executed exactly as provided for by the rules of this language.

Starting is possible in two ways: how ready to use software sequence (script or module) or as separate pieces of code that are entered directly to the program window.Interactive code launch

To test individual commands, you can use the interpreter in an interactive session mode.To do this, you must open the command line of the operating system and enter the command that starts the interpreter.

For Linux OS, it will look like this:

$ Python3 Python 3.6.7 (Default, Oct 22 2018, 11:32:17) [GCC 8.2.0] ON Linux Type "Help", "Copyright", "Credits" or "License" for more information.>>>

Now you can enter commands that will be executed immediately after that.The minus of this approach is that the entire sequence entered is not saved after closing the current session.

Interactive code execution is necessary in order to immediately test the fragment of the written code.In addition, it can be used in the learning process to verify the actions of certain operators "on the fly".This method of interpretation of the commands allows you to try the functions of the language you need, without resorting to writing individual scripts for this.

You can exit the interactive mode using the quit () command, or simply closing the terminal window in Windows.

To open the terminal or command line before starting the interpreter itself, it is necessary:

In Windows, press the "checkbox" key combination, after which you enter the CMD command and click on the "OK" button in the dialog box.

In Linux or other similar operating systems, access to the command prompt is provided with an additional program.You can use Xterm or Konsole.

In MacOS, to gain access to the terminal, you must select the "Applications" menu, followed by the "Utilities" section and click on the terminal element.

How the Python interpreter works for scripts

Starting on the execution of written scripts or modules is performed in batch mode.And performed according to a complex scheme, which consists of the following steps:

Sequential processing of all operators that are written in the script.

Compile source move in intermediate format.The interpreter creates a byte code that is a low-level programming language independent of the platform and the operating system.Byte code is required to optimize the script execution process.

Execution of the received code.At this stage, the Python Virtual Machine (PVM) enters, which cyclically moves each operator from the script and starts it to execute.As if you enter each team

sequentially in an interactive interpreter.

Run scripts on the command line

In the interactive mode, which was discussed above, you can record and perform any number of code rows.But after closing the terminal window, they are not saved.Therefore, real programs on Python are written in the form of scripts and are conventional text files.To avoid confusion when stored, they are assigned .py or .piw extensions.

You can create a text file using any editor, including NotePad.However, it is better to use more advanced solutions, such as Sublime Text.For example, take the simplest script from which to get acquainted with any programming language.

#! / usr / bin / env python3

Print ('Hello WORLD!')

The file can be saved in your working directory with any name and extension .py.

To start the script to execute, you need to use the programming language interpreter and specify the name of the file you created as an additional parameter.

$ Python3 Hello.py Hello WORLD!

In the example above, the file was called "Hello.py".After entering the command, you need to press the "Enter" key, and the script operation will appear on the screen.That is, the inscription "Hi, the world" or the classic English "Hello World"!

If the file with the program is stored not in the directory with the interpreter, you need to specify the path to it.Reassign the information output device

When the program code is executed on Python, sometimes it is necessary to save the results that displays the program on the screen.They are later analyzed to find errors or other purposes.In this case, the script must be launched by the following command:

$ Python3 Hello.py> Output.txt

According to the results of the script, a file is created with the name Output.txt, which is saved by everything that should appear on the screen during operation in the program.This is the standard syntax provided for by the operating system.

If the file with the specified name does not exist, the OS creates it automatically.If there is - data in it is overwritten without saving the previous ones.In the case when there is a need to add data to the end of a text file, instead of one icon> you must specify two >>.

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Run from the command line without an interpreter

In the latest versions of the Windows operating system, you have the ability to run scripts on Python without entering the command line name of the interpreter program.That is, you just need to write the name of the file with the extension.

C: \ Devspace> Hello.py Hello WORLD!

It is determined by the fact that when clicking on the file or start it from the command line, the operating system automatically searches for a connected application and starts it.Similarly, you open Word files by simply clicking on them the mouse cursor.

In UNIX, in this way, you can also run scripts.However, for this, in the first string of the text file with commands, you must add text #! / Usr / bin / env python.It indicates a program with which runs.A programming language interpreter regards the string as a comment and skips it.Running scripts from interactive mode

Being in the interactive mode (described in the first partition), the user can download a file with a previously written command sequence and run it on execution.This method can be applied when the module contains calls for functions, methods or other operators generating text on the screen.Otherwise, the visible results of the program will not be.

You can start the script from the interactive mode by the command:

>>> Import Hello Hello WORLD!

Please note that this command is triggered once for an interactive session.Therefore, if you make changes to a file with a script and restart it with this command, nothing happens.Conclusion

Now you know that the Python commands and scripts can be launched in different ways and in different modes.This will allow you to choose the desired option to solve a specific task, increase the speed of your work, make it productive and flexible.

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