Python Variables

Summary: in this tutorial, you'll learn about Python variables and how to use them effectively.

What is a variable in Python

When you develop a program, you need to manage values, a lot of them. To store values, you use variables.

In Python, a variable is a label that you can assign a value to it. And a variable is always associated with a value. For example:

```
message = 'Hello, World!'
print(message)
```

```
message = 'Good Bye!'
print(message)
```

Output:

```
Hello, World!
Good Bye!
```

In this example, `message` is a variable. It holds the string `'Hello, World!'`. The `print()` function shows the message `Hello, World!` to the screen.

The next line assigns the string `'Good Bye!'` to the `message` variable and print its value to the screen.

The variable `message` can hold various values at different times. And its value can change throughout the program.

Creating variables

To define a variable, you use the following syntax:

```
variable_name = value
```

The `=` is the assignment operator. In this syntax, you assign a value to the `variable_name`.

The value can be anything like a number (https://www.pythontutorial.net/python-basics/python-numbers/), a string (https://www.pythontutorial.net/python-basics/python-string/), etc., that you assign to the variable.

The following defines a variable named `counter` and assign the number 1 to it:

```
counter = 1
```

Naming variables

When you name a variable, you need to adhere to some rules. If you don't, you'll get an error.

The following are the variable rules that you should keep in mind:

- Variable names can contain only letters, numbers, and underscores (_). They can start with a letter or an underscore (_), not with a number.

- Variable names cannot contain spaces. To separate words in variables, you use underscores for example `sorted_list` .

- Variable names cannot the same as keywords, reserved words, and built-in functions in Python.

The following guidelines help you define good variable names:

- Variable names should be concise and descriptive. For example, the `active_user` variable is more descriptive than the `au` .

- Use underscores (_) to separate multiple words in the variable names.

- Avoid using the letter `l` and the uppercase letter `O` because they look like the number `1` and `0` .

Summary

- A variable is a label that you can assign a value to it. The value of a variable can change throughout the program.

- Use the `variable_name = value` to create a variable.

- The variable names should be as concise and descriptive as possible. Also, they should adhere to Python variable naming rules.