001-python-variables

Q1.. Write all the conventions being followed while declaring a variable.
Q2. What will happen if we declare a restricted keyword as a variable?
Q3. Can we actually declare a string as a variable name?
Q4. Is it possible for us to declare "_" as a variable? If so, then write an example of it.
Q5. Using an example, explain how the variables in python are dynamic in nature.

Q1. Conventions followed while declaring a variable in Python are:

Variable names should begin with a letter or an underscore (_).
The variable name should not start with a number.
Variable names are case-sensitive.
Variable names should not contain any special characters except an underscore (_).
Variable names should be descriptive and meaningful.
Avoid using reserved keywords as variable names.
Use lowercase letters for variable names in Python.

Q2. If we declare a restricted keyword as a variable, we will get a syntax error because Python reserves certain keywords for its own use, and we cannot use them as variable names. For example, if we try to declare a variable with the name "if," we will get an error because "if" is a reserved keyword in Python.

Q3. Yes, we can declare a string as a variable name in Python. However, it is not recommended to use a string as a variable name because it can cause confusion and make the code difficult to read.

Q4. Yes, it is possible to declare "_" as a variable in Python. Here is an example:

```
_ = 10
print(_)
```

In the above code, we have declared a variable named "_" and assigned the value 10 to it. We can use this variable in our code just like any other variable.

Q5. Variables in Python are dynamic in nature, which means that we can assign any value to a variable, and Python will automatically determine the data type of the variable based on the value assigned to it. For example:

```
x = 10
print(type(x))  # Output: <class 'int'>

x = 3.14
print(type(x))  # Output: <class 'float'>
```

```
x = "Hello, world!"
print(type(x))  # Output: <class 'str'>
```

In the above code, we have assigned different values to the variable "x" and printed its data type using the type() function. Python automatically determines the data type of the variable based on the value assigned to it, and we can assign any value to the variable without declaring its data type.