# Python Variables

## Creating Variables

Unlike other programming languages, Python has no command for declaring a variable.

A variable is created the moment you first assign a value to it.

### Example

x = 5

y = "John"

print(x)

print(y)

Variables do not need to be declared with any particular type and can even change type after they have been set.

### Example

x = 4 # x is of type int

x = "Sally" # x is now of type str

print(x)

## Variable Names

A variable can have a short name (like x and y) or a more descriptive name (age, carname, total\_volume). Rules for Python variables:

* A variable name must start with a letter or the underscore character
* A variable name cannot start with a number
* A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_ )
* Variable names are case-sensitive (age, Age and AGE are three different variables)

Remember that variables are case-sensitive

## Output Variables

The Python print statement is often used to output variables.

To combine both text and a variable, Python uses the + character:

### Example

x = "awesome"

print("Python is " + x)

You can also use the + character to add a variable to another variable:

### Example

x = "Python is "

y = "awesome"

z = x + y

print(z)

For numbers, the + character works as a mathematical operator:

### Example

x = 5

y = 10

print(x + y)

If you try to combine a string and a number, Python will give you an error:

### Example

x = 5

y = "John"

print(x + y)

## Test Yourself With Exercises

## Exercise:

Create a variable named carname and assign the value Volvo to it.

\_\_\_\_\_\_ = "\_\_\_\_\_\_\_"