# 6. PYTHON - VARIABLES

## Contents

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### 1. Variable

- ✓ Variable is a reserved memory location to store values.

### 2. Purpose of the variable

- ✓ The purpose of variable is to represent the data
- ✓ Data means a collection of facts
- ✓ Facts can be,
  - o Alphabets.
  - o Numbers.
  - o Alphanumeric
  - o Symbols

### 3. Properties of variable

- ✓ Every variable has its own properties,
- ✓ Every variable can contain,
  - o Name
  - o Type
  - o Value

### 4. Naming convention to a variable

- ✓ Name should start with lower case.
- ✓ If name having multiple words then separating every word with underscore symbol is a good practice

### 5. Creating a variable

- ✓ We need to follow below syntax to create a variable.

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Syntax

    name_of_the_variable = value

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| Program Name | Creating a single variable demo1.py |
|---|---|
| | ```python
age = 16
print(age)
``` |
| output | 16 |

| Program Name | Creating two variables demo2.py |
|---|---|
| | ```python
name = "Daniel"
age = 16

print(name)
print(age)
``` |
| output | Daniel
16 |

| Program Name | Creating two variables and using one print demo3.py |
|---|---|
| | ```python
name = " Daniel"
age = 16

print(name, age)
``` |
| output | Daniel 16 |

| | |
|---|---|
| **Program Name** | Creating a variable with meaningful text message<br>demo4.py<br><br>name = "Daniel"<br><br>print("I am", name) |
| **output** | I am Daniel |

**Important note**

- ✓ Python having dynamic data type nature.
- ✓ It means, while creating variable we no need to provide the data type explicitly in python.
- ✓ Regarding data type we will learn in Data type chapter.

## 6. Creating multiple variables in single line

- ✓ We can creating multiple variables in single line
- ✓ # Rule
  - o There should be same number on the left and right-hand sides. Otherwise we will get error.

| Program Name | Creating multiple variables in single line demo5.py |
|---|---|

```
a, b, c = 1, 2, 3

print(a)
print(b)
print(c)
```

output

```
1
2
3
```

## 7. Single value for multiple variables

✓ We can assign a single value to multiple variables simultaneously.

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| | |
|---|---|
| Program Name | Assign single value to multiple variables<br>demo6.py<br><br>a = b = c = 3<br><br>print(a)<br>print(b)<br>print(c) |
| Output | 3<br>3<br>3 |

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## 8. Variable re-initialization

- ✓ Based on requirement we can re-initialize existing variable value.
- ✓ In variable re-initialization old values will be replaced with new values.

| | |
|---|---|
| Program Name | Creating a variable<br>demo7.py<br><br>sal = 10000<br>print("My salary is:", sal) |
| Output | My salary is: 10000 |

| | |
|---|---|
| Program Name | Re-initialising variable<br>demo8.py<br><br>sal = 10000<br>sal = 12000<br><br>print("My salary is:", sal) |
| Output | My salary is: 12000 |