# Variable Examples

| EXAMPLES | Data Type |
|---|---|
| schoolName = "GCC" | str (String) |
| age = 41 | int (Integer) |
| firstNum = 10 | int (Integer) |
| price = 19.99 | float |
| class_Status = "Senior" | str (String) |
| gpa = 3.75 | float |
| passGood = True | bool (Boolean) |

# Assignment Statement

**Syntax:**

**variable** = **value to be stored**

# Assignment Statement
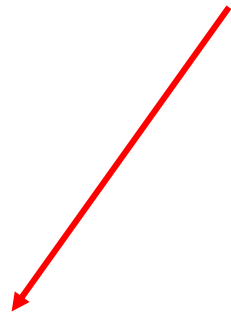
**Syntax:**

**variable = "value to be stored"**

**\*If the value is a text string, enclose in "quotes"**

# Python VARIABLES

- A **VARIABLE** is a location in the **computer's memory** where you can **store** a single value.
    - **Container** to store the value.
- A variable can be **created on the fly**.
- A variable is **initialized** (or created) the first time a value is stored in it.
- When a **variable stores a new value, the old value is forgotten**. This is called overwriting the variable.

41

**variable**

age

age = 41

age = 18

**What variable type is age?**

Senior

**variable**

class_Status

class_Status = "Senior"

class_Status = "Freshman"

**What variable type is class_Status?**

3.80

**variable**

gpa

gpa = 3.80

gpa = 2.75

**What variable type is gpa?**

passCk

**variable**



passCk

passCk = True

passCk = False

**What variable type is passCk?**

# Syntax:     variable = value to be stored

| EXAMPLES | Data Type |
|---|---|
| schoolName = "GCC" | str (String) |
| age = 41 | int (Integer) |
| firstNum = 10 | int (Integer) |
| price = 19.99 | float |
| class_Status = "Senior" | str (String) |
| gpa = 3.75 | float |
| passCk = True | bool (Boolean) |

# <span style="color:red">Rules</span> for Variable Names

1. Cannot begin with a number.
2. Use only Letters, Numbers, or _Underscore_
3. It can be only one word **(no spaces)**.
4. DO NOT use Python Reserve Words.

# **DO NOT USE* Reserved Words

['False', 'None', 'True', 'and', 'as', 'assert', 'break', 'class', 'continue', 'def', 'del', 'elif', 'else', 'except', 'finally', 'for', 'from', 'global', 'if', 'import', 'in', 'is', 'lambda', 'nonlocal', 'not', 'or', 'pass', 'raise', 'return', 'try', 'while', 'with', 'yield']

# Variable Naming Conventions

- **READABILITY** is IMPORTANT
  - Use **Underscore** or **Camel Case**. Which of the following is easiest to read?

**python_puppet**

**pythonPuppet**

**pythonpuppet**

# Variable Naming Conventions

- **Case Sensitive** (The following 3 variables are *NOT* the same).

- **weight**
- **Weight**
- **WEIGHT**

# Variable Naming Conventions

- **Avoid**
  - lowercase letter 'l'
  - uppercase 'O'
  - and uppercase 'I'
  - Why? Because the l and the I look a lot like each other and the number 1. And O looks a lot like 0.

# Variable Name - Use DESCRIPTIVE Variable Names

| VALID Variable Name | INVALID Variable Name – (What is the error?) |
|---|---|
| balance | current-balance |
| currentBalance | current balance |
| current_balance | 4account |
| _spam | 42 |
| SPAM | total_$um |
| Account4 | "hello" |