

# Python for Beginners – Class 1 Notes

To open Python IDLE, go to your search bar on your computer and type in “Python”. Then, select the **IDLE**. It should open up a white window.

To create a new file to type your code in, at the top left corner, click on **FILE**, then **NEW FILE**. Alternatively, you can do **Ctrl+N** to create a new file.

**F5** to run program

**Ctrl + s** to save program

To re-open a **previously saved** file, go to **File -> Open**, then select your file by going to the **same location where you saved the file**.

## Output (Print)

**print()** – prints a value in the console

If the value is a **string (text)**, it must be in **DOUBLE QUOTES!!**

```
print("hi")
>>> hi
```

If the value is a **number**, it should not be in double quotes.

```
print(4)
>>> hi
```

You must ALWAYS put **brackets** around the value!!

## Mathematical Operations:

- + add
- - subtract
- \* multiply
- / divide

```
print(1+2)
>>> 3
print (6-2)
>>> 4
print (8*2)
>>> 16
print (10/2)
>>> 5.0
print (8*3 + 4)
>>> 27
print (2*5 + 6*2)
>>> 22
```

## Strings

```
print("hi" * 5)           print the string 5 times with STAR/ASTERISK  
>>> hihihihih
```

```
print("hi" + "bye")      combine the strings with PLUS symbol  
>>> hibye
```

```
print("hi, "bye")        combine the strings WITH A SPACE in between using COMMA  
>>> hi bye
```

## Comments

**Commenting** portions of your code tells the program to ignore that section when running the code. This may be helpful when you don't want that portion to show up in the output window, but you also don't want to delete the code.

To comment, **highlight** the portion of code and do **Alt + 3**

To undo the comment, **highlight** the commented code and do **Alt + 4**

## Variables

Variables are names that store values.

To define a variable, use **variableName = variableValue**

```
firstName = "Bob" set the variable "firstName" to value "Bob"  
lastName = "Joe" set the variable "lastName" to value "Smith"  
age = 10          set the variable "age" to value 10
```

## Combining Variables:

Similar to combining strings, you can combine variables to print them at once

```
print(firstName + lastName) Combine two STRINGS using plus sign (no space)  
>>> Bob10
```

```
print(firstName, lastName) Combine two STRINGS using comma (space in between)  
>>> Bob 10
```

```
print(firstName + age) You cannot combine a STRING and a NUMBER using plus sign  
>>> ERROR!!!
```

```
print(firstName, age) Combine STRING and NUMBER using comma  
>>> Bob 10
```

```
print(firstName, lastName, age) Combine STRINGS and NUMBERS using comma  
>>> Bob Joe 10
```

## Writing a long sentence by combining variables:

```
print("Hi my name is", firstName, lastName, "and I am", age, "years old! ")  
>>> Hi my name is Bob Joe and I am 10 years old!
```

## Mathematical Operations with Variables

This is similar to the mathematical operations we learned above, except you replace the numerical values with **variables**.

```
first = 6   set the variable "first" to value 6  
second = 8  set the variable "second" to value 8
```

```
print(first + second)   Add two NUMERICAL variables with plus sign  
>>> 14
```

```
print(first - second)   Subtract two NUMERICAL variables with minus sign  
>>> -2
```

```
print(first * second)   Multiply two NUMERICAL variables with asterisk sign  
>>> 48
```

```
print(first / second)   Divide two NUMERICAL variables with slash sign  
>>> 0.75
```

You can even create **longer mathematical expressions** – Python will follow the Order of Operations (BEDMAS)!

```
print(first * second + second)  
>>> 56
```

```
print(first * second + first -2)  
>>> 52
```

```
print(first + second * 3)  
>>> 30
```