Boolean Variables

A Special Type of Variable

There is one other type of variable that is worth mentioning, and that is a variable that will store only one of two values, *True* or *False*. The type of variable is called Boolean, and is named after mathematician George Boole. So to create a variable of this type we do it the same way as any other variable assignment:

```
X = False
```

And we can see what value "X" has by doing the following:

```
print(X)
```

And we will get the following on the screen:

```
False
```

The NOT Function

So if we want to print out the opposite of what is stored in a particular variable, we can use the *not* function. So if the variable "X" has a value of *True*, as follows:

```
X = True
```

And if we do the following:

```
Y = not(X)
```

Then if we print "Y":

```
print(Y)
```

We will get:

```
False
```

So the *not* function tells you the opposite, so if the variable "X" represents if someone is over 18 years old, then *not*(X) represents if someone is not over 18.

We can also do the following:

```
Z = not(not(X))
```

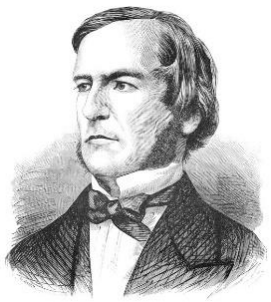
Then if we print "Z":

```
print(Z)
```

We will get:

```
True
```

BIOGRAPHY: George Boole



Boole was born in Lincoln on 2nd November 1815 and died in Cork on 8th December 1864. He was a self-taught mathematician who was the first professor of mathematics at Queen's College, Cork (now called *University College Cork*). His most important work on symbolic logic that was contained in his monograph "*The Laws of Thought*", and focuses on the use of *True* and *False* to help automate different decision-making processes, which is used in a wide range of fields, including programming & designing circuits.