More on the IF Statement

Better Variable Naming

When writing our programs, in practice, we will try to use sensible and descriptive variable names, so if we wanted to check if someone was born after 1967:

```
DateOfBirth = 1985

if (DateOfBirth > 1967):
    print("Date of birth is after 1967")        ← consequent
else:
    print("Date of birth is not after 1967")     ← alternative
```

And we will see this output:

```
Date of birth is after 1967
```

So if the DataOfBirth variable is great than 1967 the "consequent" is printed out, otherwise if the value is less than or equal to 1967 the "alternative" is printed out.

Compound IF Statements

It is also worth noting that it is possible to make the "condition" part of the IF Statement a compound one (made up of two parts or more) using the "and" statement. So for example, if we want to check if today is Monday and the month is October, the condition part of the IF Statement could look as follows:

```
if (Today == "Monday" and ThisMonth == "October"):
    print("It's a Monday in October")
else:
    print("It's not Monday and/or not October")
```

And only if both conditions are true, then the overall condition evaluated as true, if either is false (or both are false), then the overall statement is evaluated to be false. We note that to check if two things are equal in Python we use the "= =" statement.

Another example could be to check to see if someone was born after 1967 but before 2002, so we could write something as follows:

```
DateOfBirth = 1985

if (DateOfBirth > 1967 and DateOfBirth < 2002):
  print("Date of birth is in the range 1968-2001")
else:
  print("Date of birth is not in the range 1968-2001")
```

And we will see this output:

```
Date of birth is in the range 1968-2001
```

We note that to check if something is in the range of 1968-2001, our condition has to check if the variable is greater than 1967 and less than 2002. We note that the opposite of "greater than" is "less than, <u>or equal to</u>", and the opposite of "less than" is "greater than, <u>or equal to</u>".