Variables, Constants And Data Types

In the following set of notebooks, you will be introduced to some basics of programming in general and Python in particular.

This notebook covers the following topics:

1. string and numeric constants
2. variables
3. data types in python
4. assignment statements
5. Reserved words

In [1]:

```python
'''
In this cell we introduce three main data types we will study in this course: int, float, and string.
Some other data types will be introduced later.
The term data type defines the range of values a data item can take.
In this cell we first look at constant values for int and float data types.
'''

print(58359000) # int data type.  Contains negative and positive integers including 0
print(95.23) # float data type.  Contains floating point values
```

```
58359000
95.23
```

In [2]:

```python
'''
String data types.  Contains sequences of printable characters.
String constants can be enclosed in either single or double quotes.
'''
print('Hello, my name is Rabih')
print("Hello, this is the first day of class")
```

```
Hello, my name is Rabih
Hello, this is the first day of class
```

In [3]:

```python
'''
Variables and assignment.  Variables are like names for containers holding values.
They can be referenced for processing in the program.  Values can be assigned to
variables via assignment statements.
'''
x = 15.8
y = 20.2
z = y
u = y+x
print(x)
print(y)
print(z)
print(u)
```

```
15.8
20.2
20.2
36.0
```

In [7]:

```python
'''
Python contains a list of words that have special meaning and are part of the syntax.
These are called reserved words or keywords.  You may not use a reserved word as the name for your
```

```
variable,
or function (to be discussed later).
For example, 'if' is a reserved word and therefore, executing the statement below will result in e
rror.
'''
if = 5
```

```
  File "<ipython-input-7-462cacf17398>", line 7
    if = 5
       ^
SyntaxError: invalid syntax
```