1: Variable and Assignment

In [31]:
```
#1a:
name = 'Ruth'
print(name)
```

```
Ruth
```

In [32]:
```
#1b:
age = 19
print(age)
```

```
19
```

In [33]:
```
#1c:
name, age = age, name
```

In [34]:
```
print(age)
```

```
Ruth
```

In [35]:
```
print(name)
```

```
19
```

2: Data Types

In [76]:
```
#2a
print(type(5))
print(type(5.0))
print(type("5"))
print(type([5]))
print(type((5, )))
print(type({5}))
print(type(True))
```

```
<class 'int'>
<class 'float'>
<class 'str'>
<class 'list'>
<class 'tuple'>
<class 'set'>
<class 'bool'>
```

In [30]:
```
#2b
is_student = True
print(is_student)
```

```
True
```

3: Basic Operators

In [36]:
```
#3a
a = 15 + 23
```

```
b = 34 - 50
c = 8 * 7
d = 100 / 4
print (a,b,c,d)
```

```
38 -16 56 25.0
```

In [37]:
```
#3b
a = 10
b = 5
c = a / b
d = a ** b
print (c, d)
```

```
2.0 100000
```

4: Type Conversion

In [55]:
```
#4a
a = "123"
type(a)
```

Out[55]:
```
str
```

In [77]:
```
b=int(a)
type(b)
```

Out[77]:
```
int
```

In [73]:
```
#4b
x = 456
type(x)
```

Out[73]:
```
int
```

In [75]:
```
y = str(x)
type(y)
```

Out[75]:
```
str
```

In [62]:
```
w = 78.9
type(w)
```

Out[62]:
```
float
```

In [68]:
```
s = int(w)
print(b, y, s)
```

```
123 456 78
```

5: String Manipulation

In [69]:
```
#5a
p = "Python"
r = "Rocks"
```

```
d = p + r
print(d)
```

```
PythonRocks
```

In [71]:
```
#5b
h = "hello"
g = h * 3
print(g)
```

```
hellohellohello
```

6: Bonus Question

In [4]:
```
#6
x = 5
y = 10
z = 15
```

In [6]:
```
#x has value of y
print(x+x)
```

```
10
```

In [7]:
```
#y has the value of z
print(y+x)
```

```
15
```

In [8]:
```
#z has the value of x
print(z-y)
```

```
5
```