String Operations

There are many string operation methods in Python that can be used to manipulate the data. We are going to use some basic string operations on the data.

```
String a = new String("now is");
String b = new String("the time");
String c = new String(" the");
```

instance method call	*return type*	*return value*
a.length()	int	6
a.charAt(4)	char	'i'
a.substring(2, 5)	String	"w i"
b.startsWith("the")	boolean	true
a.indexOf("is")	int	4
a.concat(c)	String	"now is the"
b.replace("t","T")	String	"The Tim"
a.split(" ")	String[]	{ "now", "is" }
b.equals(c)	boolean	false

Let's try with the method `upper`; this method converts lower case characters to upper case characters:

In [1]:
```
# Convert all the characters in string to upper case
A = "Big Data Analytics"
print(A)
```

```
Big Data Analytics
```

In [4]:
```
A = A.upper()
A
```

Out[4]:
```
'BIG DATA ANALYTICS'
```

In [5]:
```
A = A.lower()
A
```

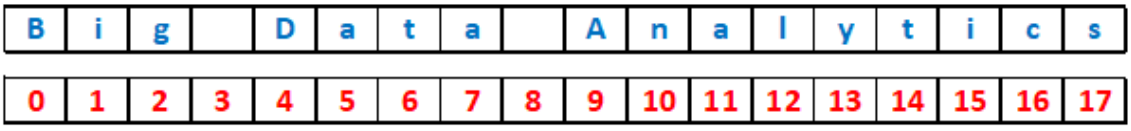
Out[5]:
```
'big data analytics'
```

The method `replace` replaces a segment of the string, i.e. a substring with a new string. We input the part of the string we would like to change. The second argument is what we would like to exchange the segment with, and the result is a new string with the segment changed:

In [41]:
```
# Replace the old substring with the new target substring is the segment has been f
B = A.replace('Analytics', 'Tools')
B
```

Out[41]:
```
'Big Data Tools'
```

The method `find` finds a sub-string. The argument is the substring you would like to find, and the output is the first index of the sequence.



Name = "Big Data Analytics"

In [42]:
```
# Find the substring in the string. Only the index of the first elment of substring
Name.find('a')
```

Out[42]:
```
5
```

In [43]:
```
# Find the substring in the string.
Name.find('Data')
```

Out[43]:
```
4
```

If the sub-string is not in the string then the output is a negative one.

In [44]:
```
# If cannot find the substring in the string

Name.find('Tools')
```

Out[44]:
```
-1
```

In [45]:
```
Nm = Name.split(' ')
Nm
```

Out[45]:
```
['Big', 'Data', 'Analytics']
```

In [46]:
```
Nm[0]
```

Out[46]:
```
'Big'
```

Consider the variable `G`, and find the first index of the sub-string `snow`:

In [12]:
```
# Write your code below and execute
G = "Mary had a little lamb Little lamb, little lamb Mary had a little lamb \
Its fleece was white as snow And everywhere that Mary went Mary went, Mary went \
Everywhere that Mary went The lamb was sure to go"
G.find("snow")
```

Out[12]:
```
95
```

In the variable `G`, replace the sub-string `Mary` with `Bob`:

In [13]:
```
# Write your code below and press Shift+Enter to execute
G.replace("Mary", "Bob")
```

Out[13]:
```
'Bob had a little lamb Little lamb, little lamb Bob had a little lamb Its fleece w
as white as snow And everywhere that Bob went Bob went, Bob went Everywhere that B
ob went The lamb was sure to go'
```

In [5]:
```
lines = "Mary had a little lamb Little lamb, little lamb Mary had a little lamb \
Its fleece was white as snow And everywhere that Mary went Mary went, Mary went \
Everywhere that Mary went The lamb was sure to go"
```

In [ ]:
```

```