Files - IV

In this notebook we revisit reading and writing from/to text files.

This cell demonstrates the effects of writing to a text file without including the newline character at the end of each line.

In [1]:

```
'''
  Write a few lines to a text file without including the newline character
'''
f = open('out.txt', 'w')
for i in range(11):
    f.write('This is line ' + str(i)) # Note there is no newline character
f.close() #close the file


'''
Read back the data and check how many lines have been printed out.  It can be seen that a single l
ine is printed out.
The value of 'count' also demonstrates that the 'for' loop is entered just one time.
'''
f = open('out.txt')
count = 0
for i in f:
    count += 1
    print(i)
f.close()
print('count = ', count)
print('done')
```

```
This is line 0This is line 1This is line 2This is line 3This is line 4This is line 5This is line 6T
his is line 7This is line 8This is line 9This is line 10
count =  1
done
```

However, like we saw earlier, when the data is written to the text file with a newline character at the end, each line is displayed separately when the file is read.

In [2]:

```
'''
  Write a few lines to a text file with a newline character at the end,
  so that each line is displayed separately when the file is read.
'''
#Write to the text file
f = open('out.txt', 'w')
for i in range(11):
    f.write('This is line ' + str(i) + '\n') # Note the newline character
f.close()

#Read from the text file
f = open('out.txt')
count = 0
for i in f:
    count += 1
    print(i)
f.close()
print('count = ', count)
print('done')
```

```
This is line 0

This is line 1

This is line 2

This is line 3
```

```
This is line 4

This is line 5

This is line 6

This is line 7

This is line 8

This is line 9

This is line 10

count =  11
done
```

The `readlines()` method offers another way for reading lines from a text file. It returns a list where each line is an element in the list.
Elements of the list are packed, and then unpacked using the 'for' loop iterator.

In [3]:

```
'''
  Use of the readlines() method
'''
#write to the file
f = open('out.txt', 'w')
for i in range(11):
    f.write('This is line ' + str(i) + '\n') # Note the newline character
f.close()

#read back from the file
f = open('out.txt')
lines = f.readlines()

print(type(lines))
for i in lines:
    print(i)
f.close()
```

```
<class 'list'>
This is line 0

This is line 1

This is line 2

This is line 3

This is line 4

This is line 5

This is line 6

This is line 7

This is line 8

This is line 9

This is line 10
```