Introduction to programming – ASSIGNMENTS 2

General instructions:

- Type in and test your programs using Python Idle.
- Bring in your answers to the next assignment (i.e. demonstration) session in memory stick, or save them to a web folder accessible in class. Alternatively, you can bring written answers with you, though this is not recommended.
- Remember to comment your code – this does NOT mean, that every single line should be commented. Comment the important parts in your program.
- Prepare to present your solution to the class.

1.

Write a program that queries the user for a string, and proceeds to output the length and the first and the last character of the string.

Example output:

```
Give a string: house
Length of the string: 5
First character: h
Last character: e
```

2.

Write a program that queries the user for a 4-letter word and then outputs that word in reverse order (i.e. the last letter becomes the first etc.).

Example output:

```
Give a 4-letter word: live
Word in reverse order: evil
```

3.

Write a program that queries the user for a two word string (i.e. a string with two words separated with a space), and outputs the latter word. Hint: you need to use the **find()** method with the **[]** operator.

Example output:

```
Enter a two word sentence: Hello everybody
The second word is everybody
```

4.

Write a program that queries the user for two strings, and proceeds to output the number of times the string can be found in another string (the output must be produced for both strings).

Example output:

```
Give the first string: carbon
Give the second string: car
The first string can be found 0 times in the second string.
The second string can be found 1 times in the first string.
```

5.

Python string objects also have a method **upper()**, which can be used to return a string in the upper case. For example

```
print "abcd".upper()
```

…would output ABCD. (Note, that the method **lower()** does the opposite conversion to lower case.)

Write a program, that queries the user for two strings, and proceeds to replace all occurrences of the second string in the first string with their uppercase versions; this modified string is finally output.

Example output:

```
Give the first string: To be or not to be
Give the second string: be
Replaced string: To BE or not to BE
```

Another example output:

```
Give the first string: i’m writing this in a hurry
Give the second string: i
Replaced string: I’m wrItIng thIs In a hurry
```

6. ** *Expert assignment* (double points):

Write a program that queries the user for strings A and B. The program then proceeds to find the index of the *second occurrence* of string B in string A.

Example output:

```
Give the string A: abcabc
Give the string B: abc
The index of the 2nd occurrence of B in A is 3.
```

Another example output:

```
Give the string A: this string is my string
Give the string B: string
The index of the 2nd occurrence of B in A is 18.
```

Note that the program only needs to function properly with valid inputs, i.e. in cases where there are two or more occurrences of string B in string A.