

# Programming Assignment 06

## - Strings

### Instructions

This programming assignment consists of **2 programming exercises**.

You have to:

1. **download** the empty Python files on NYU Classes
2. **edit** them according to the assignment
3. **verify** on your computer that it works
4. **upload** them back on NYU Classes (**do not change the filenames**)

## Exercise 1 - Check anagrams

An anagram is a word or phrase formed by rearranging the letters of a different word or phrase, using all the original letters exactly once.

Write a program (in the file `exercise1.py`) that does the following:

**Function** `check_anagrams(S1, S2)`

- takes 2 parameters:
  - `S1` → type `string`: 1<sup>st</sup> word or phrase
  - `S2` → type `string`: 2<sup>nd</sup> word or phrase
- if `S1` and `S2` are anagrams returns → type `bool`

**Note:** Space and punctuation are not taken into consideration, **only letters** (case insensitive).

**Program** `main()`

1. asks the user to **input a word or phrase**
2. asks the user to **input another word or phrase**
3. **calls** `check_anagrams` function to determine if they are anagrams
4. print a message (check examples below for the correct format)

**Sample examples** (the user input is in **red**, the printed output is in **blue**):

Enter the first word or phrase:

**I am Lord Voldemort**

Enter the second word or phrase:

**Tom Marvolo Riddle**

"I am Lord Voldemort", and "Tom Marvolo Riddle" are anagrams.

Enter the first word or phrase:

**great mia**

Enter the second word or phrase:

**I am great**

"great mia", and "I am great" are anagrams.

Enter the first word or phrase:

**I am great**

Enter the second word or phrase:

**ohgreatmia**

"I am great", and "ohgreatmia" are not anagrams.

## Exercise 2 - Formatting a title

Titles of books or articles generally capitalize the first letter of every important word. The first word is always capitalized.

The following words should not be capitalized: a, an, the, at, by, for, in, of, on, to, up, and, as, but, or, and nor. (Assume: users always input in lower cases, with no punctuation)

Write a program (in the file `exercise2.py`) that does the following:

### Function `title_case`

- takes 1 parameter `title` → type `string`
- returns the formatted title → type `string`

### Program `main()`

1. asks the user to **input the title of a book**
2. calls `title_case` function to format the title
3. print the formatted title (check examples below for the correct format)

**Sample examples** (the user input is in **red**, the printed output is in **blue**):

Enter a title to be formatted:

**a crash course to learn python in 1 week**

Here is your title: A Crash Course to Learn Python in 1 Week

Enter a title to be formatted:

**a smarter way to learn python but takes longer**

Here is your title: A Smarter Way to Learn Python but Takes Longer