

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`: 1st word or phrase
 - `S2` → type `string`: 2nd 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:
Eleven _ plus _ two!!!
Enter the second word or phrase:
Twelve - plus - one???
"Eleven _ plus _ two!!!", and "Twelve - plus - one???" are anagrams.
```

```
Enter the first word or phrase:
Elvis
Enter the second word or phrase:
Elvis lives
"Elvis", and "Elvis lives" are not anagrams.
```



Exercise 2 - Formatting a title

Titles of books or articles generally capitalize the first letter of every important word. The first and last word are 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.

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:

python for beginners: a crash course to learn python in 1 week

Here is your title: **Python for Beginners: a Crash Course to Learn Python in 1 Week**

Enter a title to be formatted:

a smarter way to learn python but it takes longer!

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