

# CS 115 - Introduction to Programming in Python

## Lab 04

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**Lab Objectives:** Strings, Files, Modules

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### Notes:

- Upload your solutions as **a single .zip file** to the Lab04 assignment for your section on Moodle **by 17:30 on Monday, October 26**. You must use the following naming convention: Lab04\_Surname\_FirstName.zip where Surname is your family name and FirstName is your first name
- You should only use functionality covered in CS115 in your solution.
- Your solution for this lab should not use lists, tuples, dictionaries.
- Include a docstring for your functions.

### PART A:

An input file named **wordList.txt** contains words. Some of these words contain only letters, other words might contain other characters such as digits, punctuation marks etc.

You will read this input file and pluralize only the words that is made up of only letters and will print out the pluralized form of these words in to an output file called pluralWordList.txt.

#### input file:

```
cherry
cs115
python
Dr.Java
section01
8Sections
student
penny
Mr Bullock
word_list
Hello!
system
```

#### output file:

```
cherries
pythons
students
pennies
systems
41.67% of the words are pluralized
```

The program should include the following functions in a script called **doc\_module.py**

- **isAllLetter:** the function takes a String as a parameter and returns true if the string is only made up of letters; otherwise, it returns false.

- **pluralizeWord:** the function takes a String as a parameter and returns the plural form of the noun. The function will handle only two rules of pluralization.
  - If the word is ending with "y", the plural form drops the "y" and ends with "ies" (cherry to cherries).
  - In all other cases, "s" is added to the word (for example, orange to oranges)
- **pluralizeAllWords:** the function takes an input filename, an output filename, it reads the words in the input file. For each of the words, the method checks whether the words is made up of only letters by calling the method **isAllLetter**. If the word is made up of all letters, it calls the **pluralizeWord** method with the word as a parameter to get the plural form. Then it writes the plural form of the word into the output file. The function will find and write the percentage of the words that are pluralized to the end of the output file.

## **PART B:**

Write a script, **yourname\_doc.py** that calls **pluralizeAllWords** function to pluralize the words in **'wordList.txt'** and create a new file for the successfully pluralized words as **'pluralWordList.txt'**.