University of Houston
Department of Computer Science

Homework 3

COSC 1306: Computer Science and Programming

Fall 2016

Sent on: 10/13/2016 6:00 AM

Due: 10/20/2016 11:59 PM

Type – Individual Work

1- (100 points)

Create a Python Program that does the following:
The program receives as input a sentence from the user; if the sentence contains all the letters of the English alphabet at least once, the program prints True in the output, otherwise it prints False.
The following example contains all the letters of the English alphabet: "We promptly judged antique ivory buckles for the next prize."

- Example of one run:

```
Please enter your Sentence:
```
We promptly judged antique ivory buckles for the next prize.

```
True
```

- Another example of one run:

```
Please enter your Sentence:
```
This is homework 3.

```
False
```

2- (5 Points in Midterm 2)

Write a program that accept a sentence from the user and then maps the list of the words in the sentence into a list of integers representing the lengths of the corresponding words.

Example of one run:

```
Please enter your sentence:
```

This is my sentence.

```
Word= ['This', 'is', 'my', 'sentence']

LetterCount= [4, 2, 2, 8]
```

- The words are separated by space.
- The user can use **'.'** , **'?'** or **'!'** at the end of the sentence or might not use any of them! Anyway your program should work and should not count any of these three characters as a word or part of a word.
- We assume that the user only uses English characters and the three mentioned characters above at the end of the sentence (. ! ?).
- We assume that user does not use more than one sentence in the input.

Important Considerations for this homework:

There are many built-in functions in Python that will parse the text, count the occurrence of a certain letter, etc. but for this homework you are NOT allowed to use them.

- You must use lists in your program.
- It does not matter if the letters in the sentence are in capital or not. You can use ***lower()*** function which returns a copy of the string in which all case-based characters have been lowercased.
- You can use *list.**append**(x)*, *list.**insert**(*i,x*)*, *list.**remove**(*x*)* and *list.**index**(x)* in your program.
- You can also use ***len()*** and operators like **in** and **not in**.
- You are **Not allowed** to use other methods such as list.**count**(*x*), list.**isalpha()** in your program.
- If you are not sure about using a function ask the TAs.
- Use the loops (while and for) in your code. Avoid copy-paste part of the code several times; after all, that is why loops are part of most programming languages.

Instruction for sending your homework:

- Python v. 3.0 or higher is the only language that you should use for this homework. We only accept a .py file for the code and a screenshot for one run of the code.
- Read the instructions of the homework carefully. Do not add anything that was not asked in the instructions. If you are not sure about something, ask the TAs by email (allow 24 hours before resending your questions) or attend office hours.
- Using functions, objects, dictionaries and all the other materials that have not been discussed in the class are not allowed.
- Start early and send your homework on-time. Submitting homework a few minutes before the deadline is not a good idea. Some students found Blackboard unresponsive in the last minutes before the deadline for homework2. To avoid that scenario, send your

homework at least a few hours before the deadline. If you have other difficulties regarding Blackboard you should ask the UH Blackboard Support: http://www.uh.edu/blackboard/support/. TAs cannot view a student's blackboard screen, and cannot help you in that way.

- Late submission penalty is 10 points per day after the deadline. Send your late assignment to f.pisheh@gmail.com with the title as follows: "1306_Homework3_Lastname_Firstname_PSID_SectionNumber". If you are registered in 11:30-1 class your Section Number is 30455 and if you are registered in 1-2:30 class your Section Number is 27510.

Good Luck!