Fitchburg State University
CSC 7014 Practice Computer Programming
Instructor: Nguyen Thai
Due: 11/4/2017 at 11:00 PM
Student: Lina Mi

Assignment 7: Palindrome

The purpose of this assignment is to learn how to manipulate strings. Your program is to be written in the Python language. You will be graded for output correctness, code comments, code indentation, descriptive variables and source code file header completeness.

As you work through the assignment be sure to answer all questions (type your answers into this document) and take all screenshots as requested (copy them into the document). For the screenshots, you can use the Snipping Tool that is built-in to Windows to capture the important parts of the lab as highlighted in the document below. Do not delete the contents of this file. When finished you will submit the document source code file and associated data files to the instructor via Blackboard. DO NOT SUBMIT ZIP FILES OR INDIVIDUAL IMAGES. If you have any questions or need any clarification, email the instructor *before* the deadline.

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1. In this lab you are to write a program in Python called *palindrome.py* to implement the checking of a palindrome string.

2. A string is a palindrome if it reads the same forward and backward. The words “mom”, “dad” and “noon” for example, are all palindromes.

3. You are to write a function called isPalindrome() that

    - Takes in a string
    - Return True if the string is palindrome
    - Return False if the string is not palindrome

4. Here are your test cases:

    a. “madam”
    b. “moon”
    c. “Was it a cat I saw”?

5. Before coding, think how you are going to tackle this problem, and write a short description of the logic of your program. **INSERT YOUR DESCRIPTION HERE.**

   Ans: 1)first input a string and get the length of the string

   2) then, check if the first letter from the left end of string and first letter from the right end of the string are same or not, disregarding the case of letter, and if the letter is not alphabet such as space, coma or question mark, then skip this letter and move on the next one;

   3) if they are not same, the string is not palindrome, print out False and complete the check, if they are same, then check the second letter from the left end of string and the corresponding second alphabet letter from the right end of string, if the two alphabet letters are not same, then the string is not palindrome, print out False, process of checking is over; if they are same, then checking the corresponding next two alphabet letters from the left end of string and from the right end of string separately, this process continues until any compared two letters are different or all of letters of the string was completely checked, if the whole string are completely examined and all pairs of checked letters are same, then the string is palindrome, print out True, the program is finished; if any pair of two checked letters are different, then the checking result is False, namely the string is not palindrome, checking process is over.

6. **TAKE A SCREENSHOT** of your input and output, and paste them here. Do not paste your source code in this document.

```
>>>
 RESTART: C:/Users/milin/Registered_Courses_2017_Summer&Fall/Registered_Courses_2017_Fall/Practice of Computer
Program/Palindrome.py
Please enter the test string:
moon
the test string:"moon "is palindrome? False
>>>
 RESTART: C:/Users/milin/Registered_Courses_2017_Summer&Fall/Registered_Courses_2017_Fall/Practice of Computer
Program/Palindrome.py
Please enter the test string:
was it a cat I saw?
the test string:"was it a cat I saw? "is palindrome? True
>>>
 RESTART: C:/Users/milin/Registered_Courses_2017_Summer&Fall/Registered_Courses_2017_Fall/Practice of Computer
Program/Palindrome.py
Please enter the test string:
madam
the test string:"madam "is palindrome? True
```

7. Submit your source code and this document to Blackboard for grading.