Computer Organization & Assembly Language- FALL-2020
Assignment 1

Total Mars = 40

Deadline = 31st October 2020

Question No.1 (10 Marks)

Part A- A string is a palindrome if, considering only alphabets, the string reads the same both backward and forward. For example, "**Madam, I'm Adam**" is a palindrome . Write an assembly code, that takes a string from user and shows if it is a palindrome or not.**(5 Marks)**

Note: Special characters should not spoil the palindrome (You may eliminate them before checking)

Part B- **Input** a list of Strings e.g **['Ali', 'Usman', 'Abdullah']** You have to sort them in ascending order . (Take Input a size of array**) (5 Marks)**

To decide which string is greater use the following algorithm. Multiply the ascii of each character with its index and add them. The string with higher value would be greater.

For Example suppose the string passed are **Ali & Umar** then :
Ali : (ascii of A) * 1 + (Ascii of l) * 2 + (Ascii of i) * 3 = (65) * 1 + (108) * 2 + (105) * 3 = 491
Umar : (ascii of U) * 1 + (Ascii of m) * 2 + (Ascii of a) * 3 + (Ascii of r) * 4 = (85) * 1 + (109) * 2 + (97) * 3 + (114) *4 = 1050

Question 2.(Word Searcher): (10 Marks)

Implement a Word Searcher that will find all the occurrences of a given word in a paragraph and capitalize all the the letters of that word.
For Example:
Paragraph = "Do you want to know who you are? Don't ask. Act! Action will delineate and define you"
Word = " you"
Output = "Do YOU want to know who YOU are? Don't ask. Act! Action will delineate and define YOU

Question No.3 (10 Marks)

Write a program that displays following output (By taking Input) ,.

(A) Input = 4 (3 Marks)

7 8 9 10
4 5 6
2 3
1

(B) (4 Marks)

Input =3 (Must be odd)

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*
**
****
**
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*

(C) Input = 5 **(4 Marks)**

```
    1
   222
  33333
 4444444
555555555
```

Question No.4 (10 Marks)

Write a program that takes an integer from the user and check whether input number is **Armstrong** or not. (Input range up to 500). An Armstrong number is an n-digit number that is equal to the sum of the nth powers of its digits. **3*3*3+7*7*7+1*1*1= 371**

Submission Guidelines:

1) Create a folder named with this format i19-XXXX_Sec
2) Place all of your questions in that folder and then compress it into zip folder
3) Submit Your Code on both Slate as well as Google Classroom

Honor Policy

In Case of any Plagiarism Case you will be rewarded a Zero in this Assignment.