LAB 8 (06 QUESTIONS)

Ex1: write a C program that asks users to type in first name string (F), last name string (L), and middle name string (M). The program will print the full name in “F M L” and “L M F” formats with spaces in between.

Sample run

```
Please enter your first name: Bach
Please enter your last name: Le
Please enter your middle name: Viet
“F M L” format: Bach Viet Le
“L M F” format: Le Viet Bach
```

Ex2: write a C program that asks users to type in 03 lowercase strings. The program will print the first and the last strings in alphabetical order.

Sample run

```
Please enter the first lowercase string: world
Please enter the second lowercase string: hello
Please enter the third lowercase string: peanut
The first string is: hello
The last string is: world
```

Ex3: Write a program **sumDigits.c** to read characters on a line, and **sum the digit characters**, ignoring the non-digit ones and everything after star (*) character.

Sample run 1:

```
Enter input: v7o/K3-968+?.2@+
Sum = 35
```

Sample run 2:

```
Enter input: ^71()-2%:46"*9W35j
Sum = 20
```

Ex4:

a. Write a program **countWords.c** to read an English sentence and count the number of words in the sentence. 2 words are separated by only one space.
Sample run 1:

```
Enter a sentence: today is a good day
Word count: 5
```

Sample run 2:

```
Enter a sentence: Sunday, 17th January 2019
Word count: 4
```

b. Change your program to accept sentences in which 2 words are separated by multiple spaces
Sample run 1:

```
Enter a sentence: today          is a    good day
Word count: 5
```

Sample run 2:

```
Enter a sentence:        Sunday, 17th          January 2019
Word count: 4
```

Ex5:

a. A palindrome is a text that reads the same backward as forward

   Implement function ***int isPalindrome(char str[]),*** which returns 1 if the word is a palindrome, or 0 otherwise.

   Assuming ***isPalindrome() accepts only lower-case strings

   Initialize your string in main() and call ***isPalindrome***() to get the result.

   Sample run 1:

   ```
   Enter word: selfless
   "selfless" is not a palindrome.
   ```

   Sample run 2:

   ```
   Enter word: kayak
   "kayak" is a palindrome.
   ```

b. Change your code ***isPalindrome***() so that it will accept strings of both upper and lower cases
   Sample run

   ```
   Enter word: kaYAK
   "kaYAK" is a palindrome.
   ```

Ex6

Implement ***void rearrange(char word[])*** which accepts an English word in lowercase and **modify the word** string in such a way that

i. If the word starts with a consonant, move all consonants in the word to the left and all vowels to the right.
ii. If the word starts with a vowel (a, e, i, o, u), move all vowels in the word to the left and all consonants to the right.

Initialize your word string in main() and call **rearrange**() to get your result

Sample run 1:

```
A word: programmer
Rearranged word: prgrmmroae
```

Sample run 2:

```
A word: ways
Rearranged word: wysa
```

Sample run 3:

```
A word: entity
Rearranged word: eintty
```

S08p07

S08p08