Instructions:

- Attempt the following tasks exactly in the given order.
- For each task, you must create a separate file in VSCode.
- You must complete all tasks individually. Absolutely NO collaboration is allowed.
- Any traces of plagiarism/cheating would result in an "F" grade in this course.
- Indent your code properly (There are special marks for this).
- Use meaningful variable names.
- Use the camel Case notation to name variables. Use meaningful prompt lines/labels for all input/output that is performed by your programs.
- Don't use an online compiler.
- Validate your input (Input validation) -2 for each program if not done in the code.

Tasks

Task1 [10]

Write a C program to count number of words in a sentence.

Sample Input = "My name is Abdllah Aftab"

Output = Number of words = 5

Task2 [10]

Palindrome: **"A word which read the same backwards as forwards"**

Write a C program that checks weather a string is Palindrome or not. Make a bool type function

bool *isPalindrome(char arr[]){*

//Code

}

Sample Input : "Racecar"

Output = True

Sample Input: "MOTHER"

Output : False

Task3 [10]

Write a C Program to Reverse a String.

Sample Input : "hello world"

Output : "dlrow olleh"

Task4 [10]

Write a C program to check weather two Strings are Anagrams of each other or not.

Anagram : To check weather two string are anagram of each other or not, frequency of each character in 1st string is equal frequency of each character in 2nd string

Example : Heart and Earth, ("Note each letter has same frequency in Both Strings")

->Make a function of **bool *isAnagram(char arr1[],char arr2[]);***

Task5 [10]

Write a C program to Sort an Array in Descending Order

Input = "{8,3,5,1,9,}"

Output = "{9,8,5,3,1}"

Task6 [10]

Write a C program to **Merge Two Sorted Arrays**

Input = "{1,2,3,4,5}", "{1,2,9,10}"

Output = "{1,1,2,2,3,4,5,9,10}"

->**BONUS MARKS = For excluding the duplicates as well** ☺