

## SE185: Problem Solving in Software Engineering

### Quiz # 6 (100 points)

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Answer the following questions and make a pdf file that includes the **source code, sample inputs, and outputs**. You must submit the **pdf file and all of the .c files** on Canvas for full credit. Do not forget to add your group partner name on the pdf file and the source codes.

**1. (100 points)** Write a complete C code that scans a **first** and **last name** into **two separate char arrays** whose memory is **statically allocated**. Your program must put the first and last names together, separated by a space, into a single string (not the char arrays used for the first/last names). Your program must **use the strlen() function** to **dynamically allocate memory** to a **char pointer** which will serve as your final string.

Use a loop to iterate through your final string (char pointer) and count only the number of letters (no spaces, null characters, or other symbols). **Use pointer notation** instead of array notation. Your program must use **malloc() and free()**.

Begin by creating these variables (**use these variable names**):

```
char first_name[50], last_name[50];  
char *full_name = NULL;  
int num_letters = 0;
```

#### Inputs and outputs format:

```
What's your first name?  
Maruf  
What's your last name?  
Ahamed  
First name: Maruf  
Last name: Ahamed  
Full name: Maruf Ahamed
```

SS #1

```
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz06
$ ./quiz06
Please enter your first name:
Jesus
Please enter your last name:
Soto
First name: Jesus
Last name: Soto
Full name: Jesus Soto
Number of letters: 10

jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz06
$ ./quiz06
Please enter your first name:
Maruf
Please enter your last name:
Ahamed
First name: Maruf
Last name: Ahamed
Full name: Maruf Ahamed
Number of letters: 12
```