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**Lab 5 - In Lab Assignment**

Due end of the lab session

Acknowledge your collaborators or source of solutions, if any. **Submission by the end of the LAB is required.** Please type your answers, handwritten submission will not be accepted. Do all of the following. A subset of your solutions will be graded.

1. For each of the following functions, explain its purpose, in one sentence
  - a. isupper: This function defined in ctype.h check if the character is upper case or not. The character is upper case if it returns nonzero value.
  - b. strlen  
This function is defined in string.h which takes string as the argument and return its length.
  - c. strcat  
This function from string.h takes two string as argument and concatenates those strings.  
strcat(destination, source). Both destination and source are of string type.
2. Write a program in C to remove characters in a string except for alphabets.

Example:

Input: a2bc\_d3ef.gh

Output: abcdefgh

## Program:

```
//including all the required libraries
#include <stdio.h>
#define SIZE 100
int main() {

    char myString[SIZE];

    //asking input from the user
    printf("Enter string you want to modify ");
    fgets(myString, sizeof(myString), stdin);

    //running loop to access each character
    for (int i = 0, j; myString[i] != '\0'; ++i) {

        //checking if character is except alphabet
        while (!(myString[i] >= 'a' && myString[i] <= 'z') && !(myString[i] >= 'A'
&& myString[i] <= 'Z')) && !(myString[i] == '\0')) {
            for (j = i; myString[j] != '\0'; ++j) {
```

```

        //removing non alphabet character
        myString[j] = myString[j + 1];
    }

    myString[j] = '\0';
}

//printing out the string to the user
printf("Final modified String:");
puts(myString);
return 0;
}

```

## OUTPUT:

```

PS C:\Users\Dhung\OneDrive\Desktop> g++ -o output .\removeCharacterExceptAlphabet.c
PS C:\Users\Dhung\OneDrive\Desktop> ./output
Enter string you want to modify: a2bc_d3ef.gh
Final modified String: abcdefgh
PS C:\Users\Dhung\OneDrive\Desktop> █

```

3. Write a program in C to replace the spaces of a string with an underscore(\_).

Example:

Input: the quick brown fox jumps over the lazy dog

Output: the\_quick\_brown\_fox\_jumps\_over\_the\_lazy\_dog

## Program:

```

//including the required libraries
#include<stdio.h>
#define SIZE 100

int main()
{
    //initialing the required variables
    int i;
    char oldChar;
    char newChar;
    char myString[100];

    //get the input from the user
    printf("Enter the string:");
    fgets(myString, SIZE, stdin);

    //character that need to be replaced

```

```

oldChar = ' ';
//character you want to replace with
newChar = '_';

//replacing oldChar with newChar
for(i=0;myString[i]!='\0';i++)
{
    if(myString[i]==oldChar)
    {
        myString[i] = newChar;
    }
    else
        continue;
}

//printing the modified string
printf("The final string is:\n");
puts(myString);
return 0;
}

```

## OUTPUT

```

PS C:\Users\Dhung\OneDrive\Desktop> g++ -o replace .\replace.c
PS C:\Users\Dhung\OneDrive\Desktop> .\replace
Enter the string:the quick brown fox jumps over the lazy dog
The final string is:
the_quick_brown_fox_jumps_over_the_lazy_dog

PS C:\Users\Dhung\OneDrive\Desktop> 

```