Course Title:	Programming Fundamentals Lab (CL1002)
Assignment Title:	Lab manual 10
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Question 1

```c
#include <stdio.h>
#include <string.h>
int main()
{
    char message[200];
    char new_message[300];
    char temp[200];
    char *ptr;

    printf("Enter customer feedback message:\n");
    gets(message);
    printf("\nTotal characters in message: %lu\n", strlen(message));

    if(strstr(message, "good") != NULL)
    {
        printf("The word 'good' exists in the message.\n");
    }
    if(strstr(message, "bad") != NULL)
    {
        printf("The word 'bad' exists in the message.\n");
        ptr = strstr(message, "bad");
        strcpy(temp, ptr + 3);
        strcpy(new_message, message);
        *ptr = '\0';

        strcat(new_message, "not good");
        strcat(new_message, temp);

        printf("\nUpdated feedback message:\n%s\n", new_message);
    }
    else
    {
        printf("\nNo 'bad' found, no replacement needed.\n");
    }

    return 0;
}
```

```
Enter customer feedback message:
the restaurant was good and clean

Total characters in message: 33
The word 'good' exists in the message.

No 'bad' found, no replacement needed.

--------------------------------
Process exited after 34.18 seconds with return value 0
Press any key to continue . . .
```

Question 2

```c
#include <stdio.h>
#include <string.h>

int main()
{
    char student_names[10][50];
    char temp_name[50];
    int i, j;

    printf("Enter names of 10 students:\n");
    for(i = 0; i < 10; i++)
    {
        printf("Student %d: ", i + 1);
        scanf(" %[^\n]", student_names[i]);
    }

    for(i = 0; i < 9; i++)
    {
        for(j = i + 1; j < 10; j++)
        {
            if(strcmp(student_names[i], student_names[j]) > 0)
            {

                strcpy(temp_name, student_names[i]);
                strcpy(student_names[i], student_names[j]);
                strcpy(student_names[j], temp_name);
            }
        }
    }
    printf("\nStudent names in alphabetical order:\n");
    for(i = 0; i < 10; i++)
    {
        printf("%d. %s\n", i + 1, student_names[i]);
    }

    return 0;
}
```

```
Enter names of 10 students:
Student 1: Usman Khan
Student 2: pankaj
Student 3: ali
Student 4: zara
Student 5: bilal
Student 6: umar
Student 7: hafsa
Student 8: innaya
Student 9: nabeel
Student 10: fazeel

Student names in alphabetical order:
1. Usman Khan
2. ali
3. bilal
4. fazeel
5. hafsa
6. innaya
7. nabeel
8. pankaj
9. umar
10. zara
```

Question 3

```c
#include <stdio.h>
#include <string.h>

int main()
{
    char email[5][100];
    char domain[5][100];
    char *ptr;
    int i;

    printf("Enter email addresses of 5 employees:\n");
    for(i = 0; i < 5; i++)
    {
        printf("Employee %d: ", i + 1);
        scanf("%s", email[i]);
    }
    for(i = 0; i < 5; i++)
    {

        ptr = strchr(email[i], '@');

        if(ptr != NULL)
        {

            strcpy(domain[i], ptr + 1);
            printf("Domain of %s is: %s\n", email[i], domain[i]);
        }
        else
        {
            printf("Invalid email: %s\n", email[i]);
        }
    }
    return 0;
}
```

```
Enter email addresses of 5 employees:
Employee 1: usmanazmat49@gmail.com
Employee 2: usman@vkonnectlogistics.com
Employee 3: umarazmat@yahoo.com
Employee 4: hafsakhan@gmail.com
Employee 5: idc@rehbar.com
Domain of usmanazmat49@gmail.com is: gmail.com
Domain of usman@vkonnectlogistics.com is: vkonnectlogistics.
Domain of umarazmat@yahoo.com is: yahoo.com
Domain of hafsakhan@gmail.com is: gmail.com
Domain of idc@rehbar.com is: rehbar.com
```