1. Implement a C program to concatenate two strings and find the length of resultant string without using built in functions.

```
#include<stdio.h>
#include<string.h>
int main()
  {
        char str1[50], str2[30],str3[100];
    int i=0, j=0;
        printf("\nEnter String 1 :");
         gets(str1);
        printf("\nEnter String 2 :");
         gets(str2);

    while (str1[i]!='\0')
    {
      str3[i]=str1[i];
      i++;
    }
    while (str2[j]!='\0')
    {
      str3[i]=str2[j];
      i++;
      j++;
    }
    str3[i]='\0';

    printf("Concatenated string of str1 and str2 is %s and length is %d\n",str3,i);
        return 0;
  }
```

```
Enter String 1 :VARUN

Enter String 2 :VISHAL
Concatenated string of str1 and str2 is VARUN VISHAL and length is 12
```

2. Develop a C program to read and print three book details (i.e. Book Title, Author, Price, number of pages, date of publication). Also print the Book details with the highest price.

```
#include<stdio.h>
#include<string.h>
#define SIZE 20

struct bookdetail
{
        char name[20];
        char author[20];
        char publication[20];
        int pages;
        float price;

};

void output(struct bookdetail v[],int n);
```

```
void main()
{
        struct bookdetail b[SIZE];

        int num,i;
        printf("Enter the Numbers of Books:");
        scanf("%d",&num);
        printf("\n");
        for(i=0;i<num;i++)

        {

                printf("\t=:Book %d Detail:=\n",i+1);

                printf("\nEnter the Book Name:\n");
                scanf("%s",b[i].name);

                printf("Enter the Author of Book:\n");
                scanf("%s",b[i].author);

                printf("Enter the date of publication:\n");
                scanf("%s",b[i].publication);

                printf("Enter the Pages of Book:\n");
                scanf("%d",&b[i].pages);

                printf("Enter the Price of Book:\n");
                scanf("%f",&b[i].price);

        }

        output(b,num);

}

void output(struct bookdetail v[],int n)

{

        int i,t=1;

        for(i=0;i<n;i++,t++)

        {

                 printf("\n");

                printf("Book No.%d\n",t);

                printf("\t\tBook %d Name is=%s \n",t,v[i].name);

                printf("\t\tBook %d Author is=%s \n",t,v[i].author);

                printf("\t\tBook %d Date of publication is=%s \n",t,v[i].publication);

                printf("\t\tBook %d Pages is=%d \n",t,v[i].pages);

                printf("\t\tBook %d Price is=%f \n",t,v[i].price);
```

```
            printf("\n");

        }

}
```

```
Enter the Numbers of Books:3

        =:Book 1 Detail:=

Enter the Book Name:
Test1
Enter the Author of Book:
A
Enter the date of publication:
19/01/1901
Enter the Pages of Book:
36
Enter the Price of Book:
12
        =:Book 2 Detail:=

Enter the Book Name:
Test2
Enter the Author of Book:
B
Enter the date of publication:
20/01/2001
Enter the Pages of Book:
42
Enter the Price of Book:
20
        =:Book 3 Detail:=

Enter the Book Name:
Test3
Enter the Author of Book:
C
Enter the date of publication:
25/01/1974
```

```
Enter the Pages of Book:
56
Enter the Price of Book:
96

Book No.1
                Book 1 Name is=Test1
                Book 1 Author is=A
                Book 1 Date of publication is=19/01/1901
                Book 1 Pages is=36
                Book 1 Price is=12.000000


Book No.2
                Book 2 Name is=Test2
                Book 2 Author is=B
                Book 2 Date of publication is=20/01/2001
                Book 2 Pages is=42
                Book 2 Price is=20.000000


Book No.3
                Book 3 Name is=Test3
                Book 3 Author is=C
                Book 3 Date of publication is=25/01/1974
                Book 3 Pages is=56
                Book 3 Price is=96.000000
```