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<b>1</b>	<p>Write a C program to merge contents of two files into a third file.</p> <p>Hint: Create three files- 2 files(file1.txt and file2.txt) with contents and third file(file3.txt) to merge contents of other two files(file1.txt and file2.txt).</p> <p>Input:</p> <p>gedit file1.txt</p> <p>Hi,Good morning!</p> <p>Have a nice day</p> <p>gedit file2.txt</p> <p>Welcome to C programming- file handling concepts</p> <p>gedit file3.txt</p> <p>//empty file</p> <p>Enter the 1st file name : file1.txt</p> <p>Enter the 2nd file name : file2.txt</p> <p>Enter the new file name to merge the two files:file3.txt</p> <p>Output:</p> <p>The two files merged into file3.txt file successfully..!!</p> <p>//Third file-Merged contents of two files(file1.txt and file2.txt)</p> <p>gedit file3.txt</p> <p>Hi,Good morning!</p> <p>Have a nice day</p> <p>Welcome to C programming- file handling concepts</p>
	<p><b>Program:</b></p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt; int main() {     char file_one[40], file_two[30], file_three[60],data[100];     printf("Enter the 1st file name : ");</pre>

	<pre> scanf("%s",&amp;file_one); printf("Enter the 2st file name : "); scanf("%s",&amp;file_two); printf("Enter the new file name to merge the two files : "); scanf("%s",&amp;file_three); FILE *fp3 = NULL; fp3 = fopen(file_three,"a"); FILE *fp1 = NULL; fp1 = fopen(file_one,"r"); if(fp1 != NULL) {     while(fgets(data,100,fp1))         fputs(data,fp3);     fputs("\n",fp3); } else     printf("File could not be opened"); FILE *fp2 = NULL; fp2 = fopen(file_two,"r"); if(fp2 != NULL) {     while(fgets(data,100,fp2))         fputs(data,fp3); } else     printf("File could not be opened"); fclose(fp1); fclose(fp2); fclose(fp3); return 0; } </pre>
	<p><b>Output Screenshot:</b></p>


	<pre>D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_9\Program1&gt;a Enter the 1st file name : file1.txt Enter the 2st file name : file2.txt Enter the new file name to merge the two files : file3.txt  D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_9\Program1&gt;</pre> <p> file3 - Notepad</p> <p>File Edit Format View Help</p> <p>Hi, Good morning! Have a nice day Welcome to C programming- file handling concepts</p>
2	<p>Write a C program to write multiple lines in a text file.</p> <p>Input:</p> <p>enter the filename</p> <p>file.txt</p> <p>Enter the number of lines to be written : 2</p> <p>The lines are</p> <p>hi hello</p> <p>how are you</p> <p>Output:</p> <p>The content of the file file.txt is :</p> <p>hi hello</p> <p>how are you</p>
	<p><b>Program:</b></p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt; int main() {</pre>

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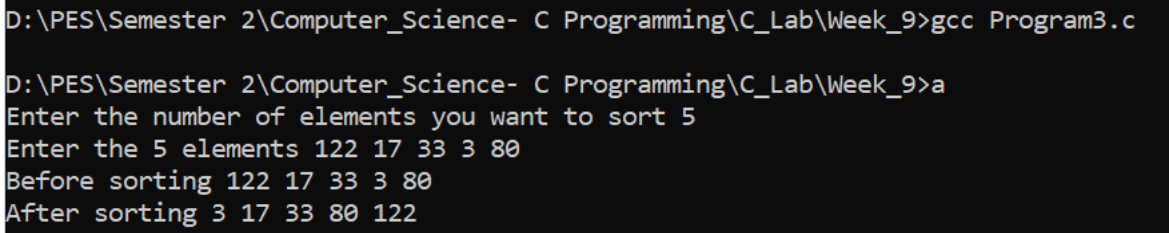
int count=0,lines=0;
char file_name[50], data[100];
printf("Enter the file name : ");
scanf("%s",&file_name);
printf("Enter the number of lines to be written : ");
scanf("%d",&lines);
fflush(stdin);
printf("The lines are ");
FILE *fp = NULL;
fp = fopen(file_name,"a");
if(fp != NULL)
{
    while(count<lines)
    {
        scanf("%[^\n]",&data);
        fflush(stdin);
        fputs(data,fp);
        fputs("\n",fp);
        count++;
    }
    fclose(fp);
}
else
    printf("File could not be opened");
printf("The contents of the file %s is : \n",file_name);
fp = fopen(file_name,"r");
if(fp != NULL)
{
    while(fgets(data,100,fp))
        printf("%s",data);
}
else
    printf("File could not be opened");
return 0;
}

```

**Output Screenshot:**

	<pre>D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_9&gt;gcc Program2.c  D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_9&gt;a Enter the file name : file1.txt Enter the number of lines to be written : 2 The lines are hi welcome to c programming The contents of the file file1.txt is : hi welcome to c programming</pre> 
3	<p>Write a program to sort positive integers in the ascending order using insertion sort</p> <p>Input:</p> <p>Enter the number of elements u want to sort</p> <p>5</p> <p>Output:</p> <p>Enter 5 elements</p> <p>13</p> <p>6</p> <p>23</p> <p>1</p> <p>89</p> <p>Before sorting</p> <p>13</p> <p>6</p>

	<p>23</p> <p>1</p> <p>89</p> <p>After sorting</p> <p>1</p> <p>6</p> <p>13</p> <p>23</p> <p>89</p>
	<p><b>Program:</b></p> <pre>#include&lt;stdio.h&gt; int main() {     int num, arr_ele[20],i,j,element;     printf("Enter the number of elements you want to sort ");     scanf("%d",&amp;num);     printf("Enter the %d elements ",num);     for(i=0;i&lt;num;i++)         scanf("%d",&amp;arr_ele[i]);     printf("Before sorting");     for(i=0;i&lt;num;i++)         printf(" %d",arr_ele[i]);     for(i=1;i&lt;num;i++)     {         element = arr_ele[i];         j = i-1;         while(j&gt;=0 &amp;&amp; arr_ele[j]&gt;element)         {             arr_ele[j+1] = arr_ele[j];             j = j-1;         }         arr_ele[j+1] = element;     }     printf("\nAfter sorting ");</pre>

	<pre> for(i=0;i&lt;num;i++)     printf("%d ",arr_ele[i]);  return 0; } </pre>
	<p><b>Output Screenshot:</b></p> 
4	<p>Write a bubblesort program to sort students details based on students roll number/name in the ascending order using array of pointers, by taking input from csv file and using callback to call two functions i) sort based on roll number ii) sort based on name.</p> <p>Input: stud.csv file</p> <p>Output:</p> <pre> 99 xx  7 bb  22 cc  45 zz  8 aa  12 ff  4 gg </pre>

3 dd

27 jj

1 kk

32 ee

Enter your option

1.sort on roll

2.sort on name

0.exit

1

1 kk

3 dd

4 gg

7 bb

8 aa

12 ff

22 cc

27 jj



32 ee

45 zz

99 xx

Enter your option

1.sort on roll

2.sort on name

0.exit

2

8 aa

7 bb

22 cc

3 dd

32 ee

12 ff

4 gg

27 jj

1 kk

	<p>99 xx</p> <p>45 zz</p>
	<p><b>Program:</b></p> <pre>#include&lt;stdio.h&gt; #include&lt;string.h&gt; #include&lt;stdlib.h&gt;  struct student {     int roll_no;     char name[30]; }student[20];  void sort_rollno(int); void sort_name(int); void display(int n);  int main() {     int choice, i = 0;     char data[100],file_name[100];     printf("Input file name : ");     scanf("%s",&amp;file_name);     printf("Output : \n");     FILE *fp = NULL;     fp = fopen(file_name,"r");     if(fp != NULL)     {         while(!feof(fp))         {             fscanf(fp,"%d,%s",&amp;student[i].roll_no,&amp;student[i].name);             printf("%d %s\n",student[i].roll_no,student[i].name);             i++;         }         fclose(fp);     }     else         printf("File could not be opened"); }</pre>

```

while(1)
{
    printf("Enter your option\n1.sort on roll\n2.sort on name\n3.exit\nYour choice
: ");
    scanf("%d",&choice);
    switch(choice)
    {
        case 1: sort_rollno(i);
                display(i);
                break;
        case 2: sort_name(i);
                display(i);
                break;
        case 3: exit(0);
        default: printf("Invalid option chosen");
    }
}
return 0;
}

void sort_rollno(int n)
{
    char temp[30];
    int temp1;
    for(int i=0;i<n-1;i++)
    {
        for(int j=0;j<n-i-1;j++)
        {
            if(student[j].roll_no > student[j+1].roll_no)
            {
                temp1 = student[j].roll_no;
                student[j].roll_no=student[j+1].roll_no;
                student[j+1].roll_no=temp1;
                strcpy(temp,student[j].name);
                strcpy(student[j].name,student[j+1].name);
                strcpy(student[j+1].name,temp);
            }
        }
    }
}

void sort_name(int n)
{
    char temp[30];

```

	<pre> int temp1; for(int i=0;i&lt;n-1;i++) {     for(int j=0;j&lt;n-i-1;j++)     {         if(strcmp(student[j].name,student[j+1].name)&gt;0)         {             strcpy(temp,student[j].name);             strcpy(student[j].name,student[j+1].name);             strcpy(student[j+1].name,temp);             temp1 = student[j].roll_no;             student[j].roll_no=student[j+1].roll_no;             student[j+1].roll_no=temp1;         }     } } } void display(int n) {     int i;     printf("After sorting ...the list is\n");     for(i=0;i&lt;n;i++)     {         printf("%s %d\n",student[i].name,student[i].roll_no);     } } </pre>
	<p><b>Output Screenshot:</b></p>

```
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_9>gcc Program4.c
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_9>a
Input file name : student_details.csv
Output :
99 xx
7 bb
22 cc
45 zz
8 aa
12 ff
4 gg
3 dd
27 jj
1 kk
32 ee
0
Enter your option
1.sort on roll
2.sort on name
3.exit
Your choice : 1
After sorting ...the list is
0
kk 1
dd 3
gg 4
bb 7
aa 8
ff 12
```

```
cc 22
jj 27
ee 32
zz 45
xx 99
Enter your option
1.sort on roll
2.sort on name
3.exit
Your choice : 2
After sorting ...the list is
0
aa 8
bb 7
cc 22
dd 3
ee 32
ff 12
gg 4
jj 27
kk 1
xx 99
zz 45
Enter your option
1.sort on roll
2.sort on name
3.exit
Your choice : 3
```