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| **1** | Write a C program to merge contents of two files into a third file.  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).  Input:  gedit file1.txt  Hi,Good morning!  Have a nice day  gedit file2.txt  Welcome to C programming- file handling concepts  gedit file3.txt  //empty file  Enter the 1st file name : file1.txt  Enter the 2nd file name : file2.txt  Enter the new file name to merge the two files:file3.txt  Output:  The two files merged into file3.txt file successfully..!!  //Third file-Merged contents of two files(file1.txt and file2.txt)  gedit file3.txt  Hi,Good morning!  Have a nice day  Welcome to C programming- file handling concepts |
|  | **Program:**  #include<stdio.h>  #include<conio.h>  int main()  {  char file\_one[40], file\_two[30], file\_three[60],data[100];  printf("Enter the 1st file name : ");  scanf("%s",&file\_one);  printf("Enter the 2st file name : ");  scanf("%s",&file\_two);  printf("Enter the new file name to merge the two files : ");  scanf("%s",&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;  } |
|  | **Output Screenshot:** |
| 2 | Write a C program to write multiple lines in a text file.  Input:  enter the filename  file.txt  Enter the number of lines to be written : 2  The lines are  hi hello  how are you  Output:  The content of the file file.txt is :  hi hello  how are you |
|  | **Program:**  #include<stdio.h>  #include<conio.h>  int main()  {  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:** |
| 3 | Write a program to sort positive integers in the ascending order using insertion sort  Input:  Enter the number of elements u want to sort  5  Output:  Enter 5 elements  13  6  23  1  89  Before sorting  13  6  23  1  89  After sorting  1  6  13  23  89 |
|  | **Program:**  #include<stdio.h>  int main()  {  int num, arr\_ele[20],i,j,element;  printf("Enter the number of elements you want to sort ");  scanf("%d",&num);  printf("Enter the %d elements ",num);  for(i=0;i<num;i++)  scanf("%d",&arr\_ele[i]);  printf("Before sorting");  for(i=0;i<num;i++)  printf(" %d",arr\_ele[i]);  for(i=1;i<num;i++)  {  element = arr\_ele[i];  j = i-1;  while(j>=0 && arr\_ele[j]>element)  {  arr\_ele[j+1] = arr\_ele[j];  j = j-1;  }  arr\_ele[j+1] = element;  }  printf("\nAfter sorting ");  for(i=0;i<num;i++)  printf("%d ",arr\_ele[i]);    return 0;  } |
|  | **Output Screenshot:** |
| 4 | 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.  Input:  stud.csv file    Output:  99 xx  7 bb  22 cc  45 zz  8 aa  12 ff  4 gg  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  99 xx  45 zz |
|  | **Program:**  #include<stdio.h>  #include<string.h>  #include<stdlib.h>  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",&file\_name);  printf("Output : \n");  FILE \*fp = NULL;  fp = fopen(file\_name,"r");  if(fp != NULL)  {  while(!feof(fp))  {  fscanf(fp,"%d,%s",&student[i].roll\_no,&student[i].name);  printf("%d %s\n",student[i].roll\_no,student[i].name);  i++;  }  fclose(fp);  }  else  printf("File could not be opened");  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];  int temp1;  for(int i=0;i<n-1;i++)  {  for(int j=0;j<n-i-1;j++)  {  if(strcmp(student[j].name,student[j+1].name)>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<n;i++)  {  printf("%s %d\n",student[i].name,student[i].roll\_no);  }  } |
|  | **Output Screenshot:** |