**Program to implement Merge Sort**

**#include<stdio.h>**

**#include<conio.h>**

**void quicksort(int x[], int first, int last);**

**int main(){**

**int size;**

**printf("Enter size of the array: ");**

**scanf("%d",&size);**

**int x[size];**

**printf("Enter elements of the array: \n");**

**for(int i = 0; i < size; i++){**

**scanf("%d",&x[i]);**

**}**

**quicksort(x,0,size-1);**

**printf("Sorted elements: (Using Quick Sort)\n ");**

**for(int i = 0; i < size; i++){**

**printf("%d ",x[i]);**

**}**

**getch();**

**}**

**void quicksort(int x[], int first, int last){**

**int pivot,j,temp,i;**

**if(first<last){**

**pivot = first;**

**i = first;**

**j = last;**

**while(i<j){**

**while(x[i] <= x[pivot]&&i<last)**

**i++;**

**while(x[j]>x[pivot])**

**j--;**

**if(i<j){**

**temp = x[i];**

**x[i] = x[j];**

**x[j] = temp;**

**}**

**}**

**temp = x[pivot];**

**x[pivot] = x[j];**

**x[j] = temp;**

**quicksort(x,first,j-1);**

**quicksort(x,j+1,last);**

**}**

**}**

**Output:**

