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#include <stdio.h>

void merge(int a[], int mid, int low, int high)
{
    int i, j, k, b[10];
    i = low;
    j = mid + 1;
    k = low;

    while (i <= mid && j <= high)
    {
        if (a[i] < a[j])
        {
            b[k] = a[i];
            i++;
            k++;
        }
        else
        {
            b[k] = a[j];
            j++;
            k++;
        }
    }
    while (i <= mid)
    {
        b[k] = a[i];
        k++;
        i++;
    }
    while (j <= high)
    {
        b[k] = a[j];
        k++;
        j++;
    }
    for (i = low; i <= high; i++)
    {
        a[i] = b[i];
    }
}

void mergesort(int a[], int low, int high)
{
    int mid;
    if(low<high)
    {
        mid = (low + high) /2;
        mergesort(a, low, mid);
        mergesort(a, mid+1, high);
        merge(a, mid, low, high);
    }
}

int main()
{
    int a[10],n,i;
    printf("\nEnter size of array :");
    scanf("%d",&n);
    printf("\nEnter elements into array:");
    for(i=0;i<n;i++)
        scanf("%d",&a[i]);
}

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mergesort(a, 0, n-1);

    printf("\nElements after merge sort:");
    for(i=0;i<n;i++)
printf("%d  ",a[i]);

    return 0;
}
```