

Least Number Pair

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#include <stdio.h>
#include <stdlib.h>

void merge(int arr[],int left,int mid,int right);
void merge_sort (int arr[], int left, int right)
{
    if(left >=right)
    {return;}
    int mid = left+(right-left)/2;
    merge_sort(arr,left,mid);
    merge_sort(arr,mid+1,right);
    merge(arr,left,mid,right);
}

void merge(int arr[],int left,int mid,int right)
{
    int index_a, index_l=0, index_r=0;

    int size_left = mid - left + 1;

    int size_right = right - mid;

    int L[size_left], R[size_right];

    for(int i=0;i<size_left;i++)
    {
        L[i]=arr[left+i];
    }

    for(int i=0;i<size_right;i++)
    {
        R[i]=arr[mid+1+i];
    }

    for(index_a = left; index_l < size_left && index_r < size_right; index_a++)
    {
        if( L[index_l]< R[index_r] )
        {
            arr[index_a] = L[index_l];
            index_l += 1;
        }

        else
        {
            arr[index_a] = R[index_r];
            index_r += 1;
        }
    }

    while (index_l < size_left)
    {
        arr[index_a] = L[index_l];
        index_l += 1;
    }
}
```

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        index_a += 1;
    }

    while (index_r < size_right)
    {
        arr[index_a] = R [index_r];
        index_r += 1;
        index_a += 1;
    }
}

int main()
{
    int i, n, *arr;

    printf("Enter the number of elements you want to enter: \t");

    scanf("%d",&n);
    arr=(int*) malloc(n*sizeof(int));

    for(int i=0;i<n;i++){scanf("%d",&arr[i]);}

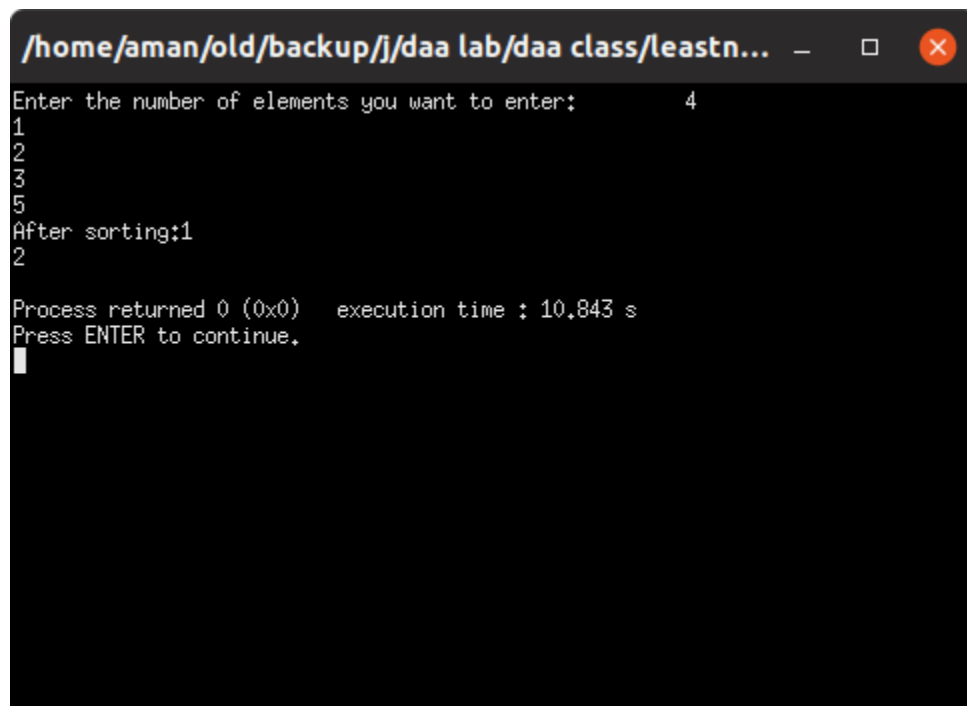
    printf("After sorting:");
    merge_sort(arr,0,n);

    for(i=1; i<3; i++)
    {

        printf("%d\n",arr[i]);

    }
    return 0;
}

```



```

/home/aman/old/backup/j/daa lab/daa class/leastn...
Enter the number of elements you want to enter:      4
1
2
3
5
After sorting:1
2

Process returned 0 (0x0)   execution time : 10.843 s
Press ENTER to continue.

```