Program for heapsort

#include <stdio.h>

int main()

{

int arr[10], no, i, j, c, heap\_root, temp;

printf("Input number of elements: ");

scanf("%d", &no);

printf("\nInput array values one by one : ");

for (i = 0; i < no; i++)

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

for (i = 1; i < no; i++)

{

c = i;

do

{

heap\_root = (c - 1) / 2;

if (arr[heap\_root] < arr[c])

{

temp = arr[heap\_root];

arr[heap\_root] = arr[c];

arr[c] = temp;

}

c = heap\_root;

} while (c != 0);

}

printf("Heap array : ");

for (i = 0; i < no; i++)

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

for (j = no - 1; j >= 0; j--)

{

temp = arr[0];

arr[0] = arr[j];

arr[j] = temp;

heap\_root = 0;

do

{

c = 2 \* heap\_root + 1;

if ((arr[c] < arr[c + 1]) && c < j-1)

c++;

if (arr[heap\_root]<arr[c] && c<j)

{

temp = arr[heap\_root];

arr[heap\_root] = arr[c];

arr[c] = temp;

}

heap\_root = c;

} while (c < j);

}

printf("\nSorted array : ");

for (i = 0; i < no; i++)

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

printf("\n");

}

