**PRACTICAL ASSIGNMENT 9**

**Github** –

**//Implement Heap sort to sort given set of values using max or min heap.**

#include <iostream>

using namespace std;

void Maxheap(int Arr[], int n, int i){

int largest=i;

int l=2\*i+1;

int r=2\*i+2;

if (l< n && Arr[l]>Arr[largest]){

largest=1;

}

if (r< n && Arr[r]>Arr[largest]){

largest=r;

}

if (largest !=i){

swap(Arr[i],Arr[largest]);

Maxheap(Arr, n, largest);

}

}

void Maxheapsort(int Arr[], int n){

for (int i = n; i >= 0; i--) {

Maxheap(Arr, n, i);

}

for (int i = n-1; i>0; i--){

swap(Arr[0], Arr[i]);

Maxheap(Arr, i, 0);

}

}

void Display(int Arr[], int n){

for(int i=0; i<n; i++){

cout<<Arr[i]<<" ";

}

cout<<"\n";

}

int main(){

int n, Arr[n];

cout<<"How many elements do you want to sort: ";

cin>>n;

cout<<"Enter "<<n<<" " "Elements: ";

for (int i=0; i<n; i++){

cin>>Arr[i];

}

Maxheapsort(Arr, n);

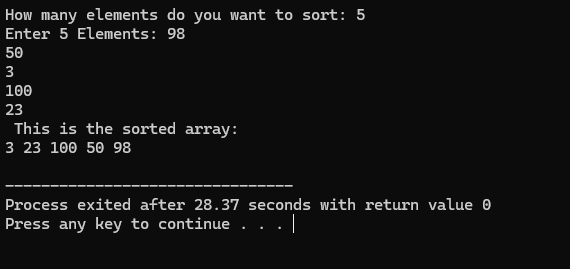
cout<<" This is the sorted array: \n";

Display(Arr, n);

return 0;

}

**.**

**OUTPUT:**