#include<stdio.h>

#include<string.h>

int count=0;

int queue[1000];

struct array{

 int data;

 char name[30];

}a[100];

main()

{

 int i,data,qty,j;

 char name[30];

 printf("enter the number of devotees");

 scanf("%d",&qty);

 i=0;

 while(i<=qty-1)

 {

 printf("\nenter the integer data that Devotee has paid in for the worship\n");

 scanf("%d",&data);

 fflush(stdin);

 printf("\nenter the name of the devotee\n");

 gets(&name[0]);

 insert(a,i,data,&name[0]);

 fflush(stdin);

 printf("\nINSERTION SUCCESSFULL\n");

 i++;

 }

 //insert(a,qty)

 printf("\n");

 for(int j=0;j<=qty-1;j++)

 {

 printf("%d ",a[j].data);

 }

 printf("\n");

 priority(a,0,qty-1);

}

void insert(struct array a[],int i,int data,char \*p)

{

 if(i==0){

 a[i].data=data;

 strcpy(a[i].name,p);

 }

 else

 {

 while(i>0)

 {

 if(a[(i-1)/2].data<data)

 {

 a[i].data=a[(i-1)/2].data;

 strcpy(a[i].name,a[(i-1)/2].name);

 i=(i-1)/2;

 }

 else break;

 }

 a[i].data=data;

 strcpy(a[i].name,p);

 }

}

void priority(struct array a[],int ind,int qty)

{

 int del;

 int i,TotalIndex,arrange;

 char arrange2[30];

 TotalIndex=qty;

 printf("QUEUE IS:\n");

 printf("The Devotee having name=%s with prority=%d has position=1\n\n",a[0].name,a[0].data);

 while(TotalIndex>0){

 a[0].data=a[TotalIndex].data;

 strcpy(a[0].name,a[TotalIndex].name);

 TotalIndex-=1;

 arrange=a[0].data;

 strcpy(arrange2,a[0].name);

 i=0;

 arrangement(i,TotalIndex,a,arrange,qty,&arrange2[0]);

 del=a[0].data;

 printf("\nThe devotee of name=%s,with prority=%d ,have position=%d ",a[0].name,del,qty-TotalIndex+1);

 printf("\nThere are total %d people having priority greater than %d",qty-TotalIndex,del);

 printf("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

 printf("\n\n\_\_\_\n\n");

 }

}

void arrangement(int i,int TotalIndex,struct array a[],int arrange,int qty,char \*p)

{

 int temp;

 char temp2[30];

 if(TotalIndex==2\*i+1)

 {

 if(a[0].data<a[TotalIndex].data)

 {

 temp=a[0].data;

 strcpy(temp2,a[0].name);

 a[0].data=a[TotalIndex].data;

 strcpy(a[0].name,a[TotalIndex].name);

 a[TotalIndex].data=temp;

 strcpy(a[TotalIndex].name,temp2);

 }

 }

 else

 {

 while(a[2\*i+1].data>a[2\*i+2].data && a[2\*i+1].data>arrange && 2\*i+1<=TotalIndex && 2\*i+2<=TotalIndex && i<=TotalIndex)

 {

 a[i].data=a[2\*i+1].data;

 strcpy(a[i].name,a[2\*i+1].name);

 i=2\*i+1;

 }

 while(a[2\*i+2].data>a[2\*i+1].data && a[2\*i+2].data>arrange && 2\*i+2<=TotalIndex && 2\*i+1<=TotalIndex && i<=TotalIndex)

 {

 a[i].data=a[2\*i+2].data;

 strcpy(a[i].name,a[2\*i+2].name);

 i=2\*i+2;

 }

 a[i].data=arrange;

 strcpy(a[i].name,p);

 }

}