#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);

}

}