MY TRY

#include <iostream>

#include <vector>

using namespace std;

class Minheap{

vector<int> v;

void heapify(int i){

int min\_index = i;

int left\_child = 2\*i;

int right\_child = left\_child + 1;

if(left\_child<v.size() && v[left\_child]<v[min\_index]){

min\_index = left\_child;

}

if(right\_child<v.size() && v[right\_child]<v[min\_index]){

min\_index = right\_child;

}

if(min\_index!=i){

swap(v[i],v[min\_index]);

heapify(min\_index);

}

}

public:

Minheap(){

v.push\_back(-1);

}

void push(int data){

v.push\_back(data);

int index = v.size()-1;

int parent = index/2;

while(index>1 && v[index]<v[parent]){

swap(v[index],v[parent]);

index = parent;

parent = parent/2;

}

}

void pop(){

int last\_index = v.size()-1;

swap(v[last\_index],v[1]);

v.pop\_back();

heapify(1);

}

int top(){

return v[1];

}

bool empty(){

return v.size()==1;

}

};

class Brands{

Minheap h;

string gender\_products[100][2];

int number\_of\_products;

public:

void Ranges(int n,int r){

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

int amount\_ranges;

cout<<"ENTER THE RANGE FOR THE AMOUNT OF THE PRODUCT : "<<endl;

cin>>amount\_ranges;

h.push(amount\_ranges);

}

number\_of\_products=r;

}

void Price(int max,int min){

gender\_products[0][0]="MALE";

gender\_products[0][1]="FEMALE";

if(min==h.top()){

h.pop();

if(max==h.top()){

h.pop();

for(int j=1;j<=number\_of\_products;j++){

string products;

cout<<"ENTER THE PRODUCT FOR MALE WHOSE COST IS IN THE RANGE OF THE MAX AND THE MIN : "<<endl;

cin.ignore();

getline(cin,products);

gender\_products[j][0]=products;

}

for(int j=1;j<=number\_of\_products;j++){

string products;

cout<<"ENTER THE PRODUCT FOR MALE WHOSE COST IS IN THE RANGE OF THE MAX AND THE MIN : "<<endl;

cin.ignore();

getline(cin,products);

gender\_products[j][1]=products;

}

}

}

else if(min==h.top()){

h.pop();

if(max==h.top()){

h.pop();

for(int j=1;j<=number\_of\_products;j++){

string products;

cout<<"ENTER THE PRODUCT FOR MALE WHOSE COST IS IN THE RANGE OF THE MAX AND THE MIN : "<<endl;

cin.ignore();

getline(cin,products);

gender\_products[j][0]=products;

}

for(int j=1;j<=number\_of\_products;j++){

string products;

cout<<"ENTER THE PRODUCT FOR MALE WHOSE COST IS IN THE RANGE OF THE MAX AND THE MIN : "<<endl;

cin.ignore();

getline(cin,products);

gender\_products[j][1]=products;

}

}

}

else if(min==h.top()){

h.pop();

if(max==h.top()){

h.pop();

for(int j=1;j<=number\_of\_products;j++){

string products;

cout<<"ENTER THE PRODUCT FOR MALE WHOSE COST IS IN THE RANGE OF THE MAX AND THE MIN : "<<endl;

cin.ignore();

getline(cin,products);

gender\_products[j][0]=products;

}

for(int j=1;j<=number\_of\_products;j++){

string products;

cout<<"ENTER THE PRODUCT FOR MALE WHOSE COST IS IN THE RANGE OF THE MAX AND THE MIN : "<<endl;

cin.ignore();

getline(cin,products);

gender\_products[j][1]=products;

}

}

}

}

void Print(string gender){

for(int i=0;i<2;i++){

if(gender\_products[0][i]==gender){

for(int j=1;j<=number\_of\_products;j++){

cout<<gender\_products[j][i]<<", ";

}

}

}

cout<<endl;

}

};

int main(){

Brands b;

int n;

cout<<"ENTER THE NUMBER OF THE RANGES : "<<endl;

cin>>n;

int r;

cout<<"ENTER THE NUMBER OF PRODUCTS : "<<endl;

cin>>r;

b.Ranges(n,r);

int max,min;

cout<<"ENTER THE MAX AND MIN RANGE OF YOUR PRICE : "<<endl;

cin>>max;

cout<<endl;

cin>>min;

b.Price(max,min);

string gender;

cout<<"ENTER THE GENDER : "<<endl;

cin>>gender;

b.Print(gender);

}

OUTPUT-

