**Student.java**

import java.io.\*;

import java.util.\*;

import java.sql.\*;

class bubble

{

int n;

bubble()

{

n=0;

}

void sort(Vector v)

{

n=v.size()-1;

String tempname="\0",tempadd="\0",tempsubst="\0";

int tempmarks=0,tempid=0,tempch=0;

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

{

for(int j=0;j<n;j++)

{

Input obj1=(Input) v.elementAt(j);

Input obj2=(Input) v.elementAt(j+1);

if(obj1.mark<obj2.mark)

{

tempname=obj1.name;

tempadd=obj1.address;

tempch=obj1.choice;

tempsubst=obj1.substream;

tempmarks=obj1.mark;

tempid=obj1.id;

obj1.name=obj2.name;

obj1.address=obj2.address;

obj1.choice=obj2.choice;

obj1.substream=obj2.substream;

obj1.mark=obj2.mark;

obj1.id=obj2.id;

obj2.name=tempname;

obj2.address=tempadd;

obj2.choice=tempch;

obj2.substream=tempsubst;

obj2.mark=tempmarks;

}

}

}

}

void show(Vector v,int m)

{

n=v.size();

System.out.print("\nIndex\tSeat No\tName\tUniversity\tMarks\t stream\tSubstream ");

System.out.print("\n======================================================================");

String str=new String("");

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

{

Input obj=(Input) v.elementAt(i);

if(obj.choice==1)

str=new String("Engg");

if(obj.choice==2)

str=new String("Medical");

System.out.println("\n" + (i+1) + "\t" + obj.id + "\t" + obj.name + "\t" + obj.address + "\t\t" + obj.mark + "\t" + str + "\t" + obj.substream);

m--;

if (m==0)

break;

}

}

}

class MyException extends Exception

{

private int marks;

public MyException(int marks)

{

System.out.println("hello, You typed marks more than 200... Refill Entry!!");

}

}

interface Info

{

final int TOTAL=200;

final int MAXMEDICAL=130;

final int MAXENGG=100;

}

class Input implements Info

{

int mark,id,choice,valid;

String name,address,substream;

DataInputStream in=new DataInputStream(System.in);

Input()

{

mark=0;

id=0;

name=null;

address=null;

choice=0;

substream=null;

valid=0;

}

void getInfo() throws Exception

{

try

{

System.out.println("\n\nName:");

name=in.readLine();

System.out.println("Seat No:");

id=Integer.parseInt(in.readLine());

System.out.println("University:");

address=in.readLine();

System.out.println("CET mark");

mark=Integer.parseInt(in.readLine());

}

catch(Exception e){}

if(mark>200)

throw new MyException(mark);

}

void getCh()

{

try

{

System.out.println("Choice (1.Engg / 2.Medical)");

choice=Integer.parseInt(in.readLine());

}

catch(Exception e){}

if(choice==1)

{

if(mark<MAXENGG)

System.out.println("Student is not Eligible For Engg");

else

{

Engg obj1;

obj1=new Engg();

substream=obj1.getSub();

valid=1;

}

}

if(choice==2)

{

if(mark<MAXMEDICAL)

System.out.println("Student is not Eligible For medical");

else

{

Medical obj2;

obj2=new Medical();

substream=obj2.getSub();

valid=1;

}

}

}

}

class Medical extends Input

{

String sub;

DataInputStream in2=new DataInputStream(System.in);

Medical()

{

sub=null;

}

String getSub()

{

try

{

System.out.println("Enter Choice of Substream:");

System.out.println("1.BFarm 2.MBBS 3.Dental");

int ch;

ch=Integer.parseInt(in2.readLine());

if(ch==1)

sub=new String("BFarm");

if(ch==2)

sub=new String("MBBS");

if(ch==3)

sub=new String("Dental");

}

catch(Exception e){}

return sub;

}

}

class Engg extends Input

{

String sub;

DataInputStream in1=new DataInputStream(System.in);

Engg()

{

sub=null;

}

String getSub()

{

try

{

System.out.println("Enter Choice of Substream:");

System.out.println("1.Comp 2.IT 3.EnTC");

int ch;

ch=Integer.parseInt(in1.readLine());

if(ch==1)

sub=new String("Comp");

if(ch==2)

sub=new String("IT");

if(ch==3)

sub=new String("EnTC");

}

catch(Exception e){}

return sub;

}

}

public class Student

{

public static void main(String[] args)

{

Input obj;

String str;

str=null;

int ch = 0,n = 0;

DataInputStream in3=new DataInputStream(System.in);

Vector vAll=new Vector();

Vector vMedical=new Vector();

Vector vEngg=new Vector();

Vector vEntc=new Vector();

Vector vIT=new Vector();

Vector vComp=new Vector();

Vector vBFarm=new Vector();

Vector vMBBS=new Vector();

Vector vDental=new Vector();

do

{

try

{

obj=new Input();

obj.getInfo();

obj.getCh();

if(obj.valid==1)

{

vAll.add(obj);

if(obj.choice==1)

vEngg.add(obj);

if(obj.choice==2)

vMedical.add(obj);

}

System.out.println("More? (1.Yes / 2.No)");

ch=Integer.parseInt(in3.readLine());

}

catch(Exception e){}

}while(ch!=2);

n=vAll.size();

System.out.print("\n\nLIST OF ALL ELIGIBLE STUDENTS (Medical & Engg.) ");

System.out.print("\nIndex\tSeat No\tName\tUniversity\tMarks\t stream\tSubstream ");

System.out.print("\n======================================================================");

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

{

obj=(Input) vAll.elementAt(i);

if(obj.choice==1)

str=new String("Engg");

if(obj.choice==2)

str=new String("Medical");

System.out.println("\n" + (i+1) + "\t" + obj.id + "\t" + obj.name + "\t" + obj.address + "\t\t" + obj.mark + "\t" + str + "\t" + obj.substream);

}

int cutComp=0,cutIT=0,cutEntc=0;

try

{

System.out.println("Enter Number of students for Engg:");

System.out.println("Comp:");

cutComp=Integer.parseInt(in3.readLine());

System.out.println("IT:");

cutIT=Integer.parseInt(in3.readLine());

System.out.println("EnTC:");

cutEntc=Integer.parseInt(in3.readLine());

}

catch(Exception e){}

n=vEngg.size();

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

{

obj=(Input)vEngg.elementAt(i);

if(obj.substream.equals("Comp"))

vComp.add(obj);

if(obj.substream.equals("IT"))

vIT.add(obj);

if(obj.substream.equals("EnTC"))

vEntc.add(obj);

}

int cutBFarm=0,cutMBBS=0,cutDental=0;

try

{

System.out.println("\nEnter Number of students for Medical:");

System.out.println("BFarm:");

cutBFarm=Integer.parseInt(in3.readLine());

System.out.println("MBBS:");

cutMBBS=Integer.parseInt(in3.readLine());

System.out.println("Dental:");

cutDental=Integer.parseInt(in3.readLine());

}

catch(Exception e){}

n=vMedical.size();

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

{

obj=(Input)vMedical.elementAt(i);

if(obj.substream.equals("BFarm"))

vBFarm.add(obj);

if(obj.substream.equals("MBBS"))

vMBBS.add(obj);

if(obj.substream.equals("Dental"))

vDental.add(obj);

}

bubble b;

b=new bubble();

b.sort(vComp);

b.sort(vIT);

b.sort(vEntc);

System.out.println("\nAllotment at Comp Dept");

b.show(vComp,cutComp);

System.out.println("\nAllotment at IT Dept");

b.show(vIT,cutIT);

System.out.println("\nAllotment at Entc Dept");

b.show(vEntc,cutEntc);

b.sort(vBFarm);

b.sort(vMBBS);

b.sort(vDental);

System.out.println("\nAllotment at BFarm Dept");

b.show(vBFarm,cutBFarm);

System.out.println("\nAllotment at MBBS Dept");

b.show(vMBBS,cutMBBS);

System.out.println("\nAllotment at Dental Dept");

b.show(vDental,cutDental);

}

}

**OUTPUT**

Name:

Dhiraj

Seat No:

2341

University:

Nasik

CET mark

145

Choice (1.Engg / 2.Medical)

1

Enter Choice of Substream:

1.Comp 2.IT 3.EnTC

1

More? (1.Yes / 2.No)

1

Name:

Vishal

Seat No:

3451

University:

Pune

CET mark

129

Choice (1.Engg / 2.Medical)

1

Enter Choice of Substream:

1.Comp 2.IT 3.EnTC

1

More? (1.Yes / 2.No)

1

Name:

Mohan

Seat No:

4588

University:

Pune

CET mark

186

Choice (1.Engg / 2.Medical)

1

Enter Choice of Substream:

1.Comp 2.IT 3.EnTC

1

More? (1.Yes / 2.No)

1

Name:

Prerana

Seat No:

3391

University:

Mumbai

CET mark

180

Choice (1.Engg / 2.Medical)

1

Enter Choice of Substream:

1.Comp 2.IT 3.EnTC

1

More? (1.Yes / 2.No)

2

LIST OF ALL ELIGIBLE STUDENTS (Medical & Engg.)

Index Seat No Name University Marks stream Substream

======================================================================

1 2341 Dhiraj Nasik 145 Engg Comp

2 3451 Vishal Pune 129 Engg Comp

3 4588 Mohan Pune 186 Engg Comp

4 3391 Prerana Mumbai 180 Engg Comp

Enter Number of students for Engg:

Comp:

2

IT:

0

EnTC:

0

Enter Number of students for Medical:

BFarm:

0

MBBS:

0

Dental:

0

Allotment at Comp Dept

Index Seat No Name University Marks stream Substream

======================================================================

1 4588 Mohan Pune 186 Engg Comp

2 3391 Prerana Mumbai 180 Engg Comp

Allotment at IT Dept

Index Seat No Name University Marks stream Substream

======================================================================

Allotment at Entc Dept

Index Seat No Name University Marks stream Substream

======================================================================

Allotment at BFarm Dept

Index Seat No Name University Marks stream Substream

======================================================================

Allotment at MBBS Dept

Index Seat No Name University Marks stream Substream

======================================================================

Allotment at Dental Dept

Index Seat No Name University Marks stream Substream

======================================================================