**Software construction**

**Lab5**

**Bisma Pervaiz**

**BESE 6B**

Git: https://github.com/bpervaiz/labs

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\*/

package sc\_lab6;

import java.util.\*;

/\*\*

\*

\* @author Bisma

\*/

public class studentInfo {

String[][] array= new String [6][3] ;

public void info(){

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

System.out.println("Enter your name: ");

Scanner input = new Scanner(System.in);

String name = input.nextLine();

array[i][0]=name;

System.out.println("Enter your regestration number: ");

Scanner input1 = new Scanner(System.in);

String regNo = input1.nextLine();

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

//System.out.println("dksjfkhskjdhfjks ");

while(regNo.equals(array[k][1])){

System.out.println("Enter your regestration number: ");

Scanner input3 = new Scanner(System.in);

regNo = input3.nextLine();

}

array[i][1]=regNo;

}

array[i][1]=regNo;

System.out.println("Enter your CGPA: ");

Scanner input2 = new Scanner(System.in);

String cgpa = input2.nextLine();

//check validity

float gpa = Float.parseFloat(cgpa);

while (gpa>4 || gpa<0){

System.out.println("Enter your CGPA: ");

Scanner input3 = new Scanner(System.in);

cgpa = input3.nextLine();

gpa = Float.parseFloat(cgpa);

}

array[i][2]=cgpa;

}

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

System.out.println("Name : "+array[i][0]);

System.out.println("RegNo : "+array[i][1]);

System.out.println("CGPA : "+array[i][2]);

}

}

public void minMaxAvg(){

float min=100;

float max=0;

float count=0;

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

if(Float.parseFloat(array[i][2])<min){

min = Float.parseFloat(array[i][2]);

}

if(Float.parseFloat(array[i][2])>max){

max = Float.parseFloat(array[i][2]);

}

count+=Float.parseFloat(array[i][2]);

}

System.out.println("Minimum : "+min);

System.out.println("Maximum : "+max);

System.out.println("Average : "+count/2);

for(int k=0; k<6; k++){

if(Float.parseFloat(array[k][2])<count/2){

System.out.println("Student "+array[k][0]+" has CGPA less than average i.e. "+count/2);

}

}

}

public void rankFunc(){

float[] rank = new float[2];

System.out.println("Enter 1 to search by Name or 2 to seach by Registeration number: ");

Scanner input1 = new Scanner(System.in);

String num = input1.nextLine();

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

rank[x]=Float.parseFloat(array[x][2]);

}

Arrays.sort(rank);

int opt = Integer.parseInt(num);

if(opt==1){

System.out.println("Enter name: ");

Scanner input = new Scanner(System.in);

String name = input.nextLine();

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

if(name.equals(array[i][0])){

System.out.println("Name Exists!");

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

if(array[i][2].equals(rank[f])){

System.out.println("Rank is "+rank[f]);

}

}

}

else {

System.out.println("Name Doesn't Exists!");

}

}

}

else{

System.out.println("Enter your name: ");

Scanner input = new Scanner(System.in);

String regno = input.nextLine();

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

if(regno.equals(array[i][1])){

System.out.println("Registration number Exists!");

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

if(array[i][2].equals(rank[f])){

System.out.println("Rank is "+rank[f]);

}

}

}

else {

System.out.println("Registration number Doesn't Exists!");

}

}

}

}

}

MAIN

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\*/

package sc\_lab6;

/\*\*

\*

\* @author Bisma

\*/

public class SC\_lab6 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

// TODO code application logic here

studentInfo student = new studentInfo();

student.info();

student.minMaxAvg();

student.rankFunc();

}

}