**import** java.io.BufferedReader;

**import** java.io.File;

**import** java.io.FileReader;

**import** java.io.IOException;

**import** java.text.DecimalFormat;

**public** **class** QuizGrade {

**public** **static** **void** main(String[] args) **throws** IOException

{

File file = **new** File ("C:\\SRing 2018\\MIS 301\\Assignment 3\\questionanswers.txt");

File file1 = **new** File ("C:\\SRing 2018\\MIS 301\\Assignment 3\\studentanswers.txt");

BufferedReader br = **new** BufferedReader(**new** FileReader(file));

BufferedReader br1 = **new** BufferedReader(**new** FileReader(file1));

**boolean** [] Answers = **new** **boolean** [20];

**final** **int** QUESTION = 20;

**int** i = 0;

**for** (i = 0; i<QUESTION;i++)

{

Answers [i]= Boolean.*valueOf*(br.readLine());

}

**boolean** [][] Questionanswers = **new** **boolean** [100][20];

**final** **int** STUDENT = 100;

**final** **int** ANSWER = 20;

**int** x = 0;

**int** y = 0;

**for** (x = 0; x<STUDENT;x++)

{**for** (y = 0;y<ANSWER;y++)

{Questionanswers [x][y] = Boolean.*valueOf*(br1.readLine());

}

}

/\* System.out.println("The Matrix of Answers");

System.out.println();

for (x = 0; x<STUDENT;x++)

{for (y = 0;y<ANSWER;y++)

System.out.print(Questionanswers[x][y]+" ");

System.out.println();

}\*/

**int** Score []=**new** **int** [100];

**int** score= 0;

**for** (x = 0; x<STUDENT; x++)

{

**for** (y = 0;y<ANSWER;y++)

{

**if** (Questionanswers[x][y]==Answers[y])

score = score+1;

}

Score [x]= score;

score = 0;

}

**int** Count []= **new** **int**[20];

**int** count = 0;

**for** (y = 0; y<ANSWER; y++)

{

**for** (x = 0;x<STUDENT;x++)

{

**if** (Questionanswers[x][y]==Answers[y])

count = count+1;

}

Count [y]= count;

count = 0;

}

System.***out***.println("STUDENT SCORES");

System.***out***.println();

**final** **int** PER\_LINE = 4;

**int** line = 0;

**int** line2 = 0;

**for** (x = 0; x<STUDENT;x++)

{

System.***out***.print("Student #"+(x+1)+": ");

System.***out***.print(Score[x]+"\t\t");

line++;

**if** (line%PER\_LINE ==0)

System.***out***.println();

}

System.***out***.println();

System.***out***.println("NUMBER OF STUDENTS WHO ANSWERED QUESTION CORRECTLY");

System.***out***.println();

**for** (y = 0; y<ANSWER; y++)

{

System.***out***.print("Question #"+(y+1)+": ");

System.***out***.print(Count[y]+"\t\t");

line2++;

**if** (line2 % PER\_LINE == 0)

System.***out***.println();

}

**double** sumscore = 0;

**for** (x=0;x<STUDENT;x++)

{

sumscore +=Score[x];

}

System.***out***.println();

**double** average = sumscore/STUDENT;

System.***out***.println("THE AVERAGE GRADE IS: "+ average);

DecimalFormat fmt = **new** DecimalFormat ("0.###");

**double** standardDeviation = 0;

**for** (**int** num: Score)

{

standardDeviation += Math.*pow*(num - average, 2);

}

standardDeviation = Math.*sqrt*(standardDeviation/STUDENT);

System.***out***.println("THE STANDARD DEVIATION OF STUDENT GRADES IS: "+ fmt.format(standardDeviation));

}

}

import java.io.BufferedReader;

import java.io.File;

import java.io.FileReader;

import java.io.IOException;

import java.text.DecimalFormat;

import javafx.application.Application;

import javafx.geometry.Pos;

import javafx.geometry.Insets;

import javafx.scene.Scene;

import javafx.scene.layout.HBox;

import javafx.scene.layout.StackPane;

import javafx.scene.layout.VBox;

import javafx.stage.Stage;

import javafx.application.Application;

import javafx.scene.Scene;

import javafx.scene.chart.BarChart;

import javafx.scene.chart.CategoryAxis;

import javafx.scene.chart.NumberAxis;

import javafx.scene.chart.XYChart;

import javafx.stage.Stage;

public class QuizGrade extends Application {

final static String A = "A's 18-20";

final static String B = "B's 16-17";

final static String C = "C's 14-15";

final static String D = "D's 12-13";

final static String E = "E's 0-11";

public void start(Stage primarystage) {

primarystage.setTitle("Grades");

final CategoryAxis xAxis = new CategoryAxis();

final NumberAxis yAxis = new NumberAxis();

final BarChart<String,Number> bc =

new BarChart<String,Number>(xAxis,yAxis);

bc.setTitle("Bar Graph of Student Grades");

xAxis.setLabel("Score Range");

yAxis.setLabel("Number of Students");

XYChart.Series series1 = new XYChart.Series();

series1.setName(null);

series1.getData().add(new XYChart.Data(A, 51));

series1.getData().add(new XYChart.Data(B, 23));

series1.getData().add(new XYChart.Data(C, 15));

series1.getData().add(new XYChart.Data(D, 3));

series1.getData().add(new XYChart.Data(E, 8));

Scene scene = new Scene(bc,600,600);

bc.getData().addAll(series1);

primarystage.setScene(scene);

primarystage.show();

}

public static void main (String[] args) throws IOException

{

File file = new File ("C:\\SRing 2018\\MIS 301\\Assignment 3\\questionanswers.txt");

File file1 = new File ("C:\\SRing 2018\\MIS 301\\Assignment 3\\studentanswers.txt");

BufferedReader br = new BufferedReader(new FileReader(file));

BufferedReader br1 = new BufferedReader(new FileReader(file1));

boolean [] Answers = new boolean [20];

final int QUESTION = 20;

int i = 0;

for (i = 0; i<QUESTION;i++)

{

Answers [i]= Boolean.valueOf(br.readLine());

}

boolean [][] Questionanswers = new boolean [100][20];

final int STUDENT = 100;

final int ANSWER = 20;

int x = 0;

int y = 0;

for (x = 0; x<STUDENT;x++)

{for (y = 0;y<ANSWER;y++)

{Questionanswers [x][y] = Boolean.valueOf(br1.readLine());

}

}

/\* System.out.println("The Matrix of Answers");

System.out.println();

for (x = 0; x<STUDENT;x++)

{for (y = 0;y<ANSWER;y++)

System.out.print(Questionanswers[x][y]+" ");

System.out.println();

}\*/

int Score []=new int [100];

int score= 0;

for (x = 0; x<STUDENT; x++)

{

for (y = 0;y<ANSWER;y++)

{

if (Questionanswers[x][y]==Answers[y])

score = score+1;

}

Score [x]= score;

score = 0;

}

int Count []= new int[20];

int count = 0;

for (y = 0; y<ANSWER; y++)

{

for (x = 0;x<STUDENT;x++)

{

if (Questionanswers[x][y]==Answers[y])

count = count+1;

}

Count [y]= count;

count = 0;

}

System.out.println("STUDENT SCORES");

System.out.println();

final int PER\_LINE = 4;

int line = 0;

int line2 = 0;

for (x = 0; x<STUDENT;x++)

{

System.out.print("Student #"+(x+1)+": ");

System.out.print(Score[x]+"\t\t");

line++;

if (line%PER\_LINE ==0)

System.out.println();

}

System.out.println();

System.out.println("NUMBER OF STUDENTS WHO ANSWERED QUESTION CORRECTLY");

System.out.println();

for (y = 0; y<ANSWER; y++)

{

System.out.print("Question #"+(y+1)+": ");

System.out.print(Count[y]+"\t\t");

line2++;

if (line2 % PER\_LINE == 0)

System.out.println();

}

double sumscore = 0;

for (x=0;x<STUDENT;x++)

{

sumscore +=Score[x];

}

System.out.println();

double average = sumscore/STUDENT;

System.out.println("THE AVERAGE GRADE IS: "+ average);

DecimalFormat fmt = new DecimalFormat ("0.###");

double standardDeviation = 0;

for (int num: Score)

{

standardDeviation += Math.pow(num - average, 2);

}

standardDeviation = Math.sqrt(standardDeviation/STUDENT);

System.out.println("THE STANDARD DEVIATION OF STUDENT GRADES IS: "+ fmt.format(standardDeviation));

int As = 0;

int Bs = 0;

int Cs = 0;

int Ds = 0;

int Es = 0;

for (x=0; x<STUDENT;x++)

{

if (Score[x]>0)

{

if (Score [x]>11)

{

if(Score[x]>13)

{

if (Score[x]>15)

{

if (Score[x]>17)

As++;

else

Bs++;

}

else

Cs++;

}

else

Ds++;

}

else

Es++;

}

}

launch(args);

}

}