package lab9;

/\*\*

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\* @author gawitt

\*/

public class Lab9 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

// Course course1 = new Course("Data Structures");

// Course course2 = new Course("Database Systems");

Course course3 = new Course("C201");

// course1.addStudent("Peter Jones");

// course1.addStudent("Brian Smith");

// course1.addStudent("Anne Kennedy");

// course1.addStudent("Kermit the Frog");

// course2.addStudent("Peter Jones");

// course2.addStudent("Steve Smith");

////////////////////////////////////////

for (int i = 0; i < 8; i++) {

course3.addStudent();

}// for

course3.displayRoster();

// course3.displayNumberOfCourses();

// course3.displayNumberOfStudents();

course3.dropStudent();

course3.setCourseName("TeaBagging 201");

cpurse3.displayRoster();

// System.out.println("Number of students in course1: "

// + course1.getNumberOfStudents());

// String[] students = course1.getStudents();

// for (int i = 0; i < course1.getNumberOfStudents(); i++)

// System.out.print(students[i] + ", ");

// System.out.println();

// System.out.print("Number of students in course2: "

// + course2.getNumberOfStudents());

}// main

}// class

**Object:**

package lab9;

import java.util.Scanner;

/\*\*

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\* @author gawitt

\*/

public class Course {

private int MAX = 3;

private String courseName;

private String[] students = new String[MAX];

private int numberOfStudents;

private static int numberOfCourses = 0; // Static indicates a class variable

public Course(String courseName) {

this.courseName = courseName;

numberOfCourses++;

}//course

public int getNumberOfCourses(){

return numberOfCourses;

}//getNumberOfCourses

public void displayNumberOfCourses(){

System.out.println("Number of Courses: " + numberOfCourses );

}//displayNumberOfCourses

public void addStudent(String student) {

if(numberOfStudents < MAX){

students[numberOfStudents] = student;

System.out.println("Added:" + student);

}// if

else{

System.out.println("Adding more room to the Array.");

MAX = MAX \* 2; // doubles initial capacity

String[] temp = new String[MAX];

System.arraycopy(students, 0, temp, 0, numberOfStudents);

students = temp; // Changed the references in the array.

students[numberOfStudents] = student;

}//else

numberOfStudents++;

}//addStudent

public void addStudent(){

Scanner kb = new Scanner(System.in);

System.out.println("Enter the Student name.");

String student = kb.nextLine();

addStudent(student); // adds the student from the same method implimenting the code to add a student

}//addStudent

public String[] getStudents() {

return students;

}//getStudents

public void displayNumberOfStudents(){

System.out.println("==============================================");

System.out.println("Number of Students Enrolled in " + courseName + "is " + numberOfStudents);

System.out.println("==============================================");

}//displayNumberOfStudents

public int getNumberOfStudents() {

return numberOfStudents;

}

public void setCourseName(String newName) {

courseName = newName;

System.out.println(courseName);

}//SetCourseName

public void dropStudent() {

Scanner kb = new Scanner(System.in);

System.out.println("Dropping a Student.");

displayRoster();

System.out.print("Enter the number of student to delete.");

int num = kb.nextInt(); // taking number to reference array index

num = num - 1; //making it goof proof

String Temp = students[num];

for (int i = num + 1; i < numberOfStudents; i++) {

students[i-1] = students[i]; // shifting index values up to the previous position

}// for

numberOfStudents--;

displayRoster();

System.out.println(Temp + " is deleted.");

}//dropStudent

public void displayRoster(){

System.out.println("==================");

System.out.println("Roster for : " + courseName);

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

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

}//for

displayNumberOfStudents();

}//displayRoster

}// course