Problem 1:

Create a class course and student with the following attributes and methods;

**Course:**

Double gpa(private), String course\_name(private), double credit(private)

course(){Default Constructor}

course(String course\_name, double gpa, double credit){Assign the corresponding variables}

**Student:**

Course[] C(private), String name(private), int total\_course(private)

Student(){Default constructor}

Student(String name, int total\_course){Assign the corresponding variables}

Void addcourse(course c){Add the course to the course list}

Now in the main class, you will take n as input which will be the total number of students information. It will be followed by each students’ name, total course number and courseinfos’. You have to print each students information in the reverse order.

Sample input:

2

Rahim 2

Java 3.5 3

Database 4 4

Karim 1

Numerical 3 3

Output:

Student name:

Karim

Courses:

Course name: Numerical gpa:3 credit:3

Student name:

Rahim

Courses:

Course Name: Java gpa:3.5 credit:3

Course Name: Database gpa:4 credit:4

Problem 2: Create a class named vehicle and two sub classes private\_vehicle and public\_vehicle with the following attributes and methods.[5]

**Vehicle:**

String grade

Double roadtax

Vehicle(){}

Vehicle(String grade, double roadtax){Assign the corresponding variables}

Double total\_tax(){return roadtax}

**Public\_vehicle (A child class of vehicle):**

Double fitness\_tax

Public\_vehicle(){}

Public\_vehicle(String grade, double road\_tax, double fitness\_tax){Assign the variables}

Double total\_tax(){

Return fitness\_tax+roadtax

}

**Private\_vehicle(A child of vehicle class):**

Double fitness\_tax

Private\_vehicle(){}

private\_vehicle(String grade, double road\_tax, double fitness\_tax){Assign the variables}

Double total\_tax(){

Return 1.5\*(fitness\_tax+roadtax)

}

Now in the main class, create an array of vehicles and assign some private vehicle and public vehicle in different index. Now print every vehicles’ total\_tax