Consider the following ORDB schema of a University:
Types:

    Course_t(cid:char(10), cname:varchar(50), credits:int);
    Grade_t(course: REF Course_t, grade:char(2), semester:int, year:int);
    Grades_nt as table of Grade_t;
    Student_t(sid:char(10), sname:varchar(50), gpa:float, grades:grades_nt);

The *Course_t* type describes a course offered in a university which contains a course id (*cid*), name (*cname*) and the number of credits the course has (*credits*). The *Grade_t* type described a grade obtained by a student which contains a reference to the course followed (*course*), grade obtained for the course (*grade*), the semester and year the course was taken respectively (*semester* and *year*). The list of student grades is described by the *Grade_nt* type which is a nested table of *Grade_t*. The student is described by a *Student_t* object. A student has a student id (*sid*), a name (*sname*), a grade point average (*gpa*) and a list of grades (*grades*).
Tables:

    Courses of Course_t(cid primary key);
    Students of Student_t(sid primary key) nested table grades;

The *Courses* table stored all course information of the university. The *Students* table contains information of students and grades.
Write Oracle Object SQL statements for the following:

(a)   Insert the following student and grades information into the schema given above:

sid	Sname	Gpa	grades			
			Course	grade	semester	year
S001	Sampath Wijesinghe	3.4	Ref to 'DBMS II'	null	2	2006
			Ref to 'SE I'	B+	1	2005

Assume that the courses already exist in the *Courses* table.

(b)   Change the grade of 'DBMS II' (where 'DBMS II' is the course id) to an 'A' for Sampath Wijesinghe (where sid = 'S001').

(c)   Print all students' names (*sname*) who have obtained an 'A' grade for 'DBMS II' (where 'DBMS II' is the course id).

(d)   Create a subtype of *Course_t* called *Elective_t* with the specialized attribute *consideredForGPA: Boolean*.

(e)   Write a method (called *NumAGrades*) that returns the number of 'A' grades a student has obtained.

(f)   Use the method, created in part (v.) to print the number of 'A' grades obtained by each student. Print the student's name (*sname*) and number of 'A' grades.

(g)   Print the grade point average (*gpa*) of students who have enrolled in an elective course.