Thais Minet
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6.12. Specify the following queries in SQL on the database schema of Figure 1.2.

A. Retrieve the names of all senior students majoring in ‘cs’ (computer science).

```
SELECT Name FROM STUDENT WHERE Major = 'CS';
```

B. Retrieve the names of all courses taught by Professor King in 2007 and 2008.

```
SELECT Course_name
FROM COURSE
INNER JOIN SECTION
ON COURSE.Course_number = SECTION.Course_number
WHERE Instructor = 'King' AND (Year = '07' OR Year = '08');
```

C. For each section taught by Professor King, retrieve the course number, semester, year, and number of students who took the section.

```
SELECT SECTION.Course_number, SECTION.Semester, SECTION.Year,
COUNT(*)
FROM SECTION
INNER JOIN GRADE_REPORT
ON GRADE_REPORT.Section_identifer = SECTION.Section_identifier
WHERE Instructor = 'King'
GROUP_BY GRADE_REPORT.Section_identifier;
```

D. Retrieve the name and transcript of each senior student (Class = 4) majoring in CS. A transcript includes course name, course number, credit hours, semester, year, and grade for each course completed by the student.

```
SELECT *
FROM (
  SELECT GRADE_REPORT.Grade, GRADE_REPORT.Section_identifier
  FROM GRADE_REPORT
  INNER JOIN (
    SELECT Student_number, Name
    FROM STUDENT
    WHERE Class = '4' AND Major = 'CS'
  ) AS Students
```

```
  ON Students.Student_number = GRADE_REPORT.Student_number
) AS Students_with_grades
INNER JOIN (
  SELECT COURSE.Course_name, COURSE.Course_number, COURSE.Credit_hours,
SECTION.Semester, SECTION.Year
  FROM COURSE
  INNER JOIN SECTION
  ON COURSE.Course_number = SECTION.Course_number
) AS Classes
ON Students_with_grades.Section_identifier = Classes.Section_identifier
```