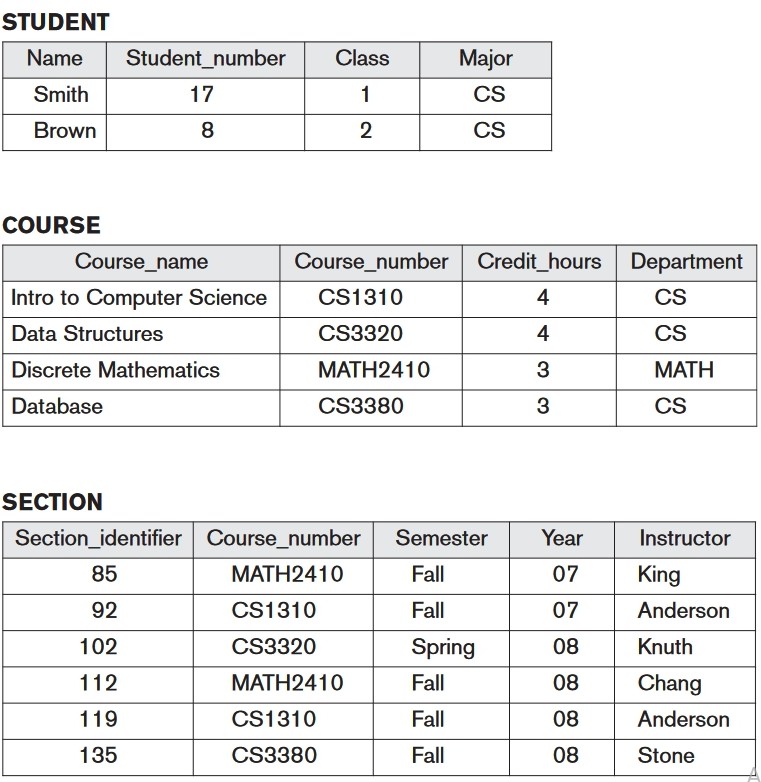
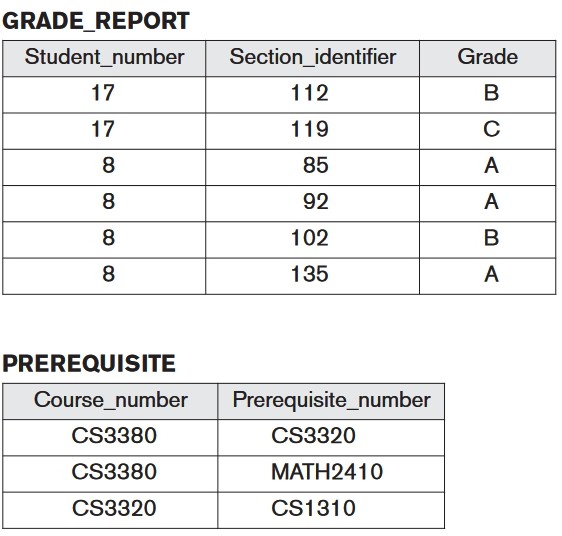
A UNIVERSITY database for maintaining information concerning students, courses, and grades in a university environment is given below. The STUDENT file stores data on each student, the COURSE file stores data on each course, the SECTION file stores data on each section of a course, the GRADE\_REPORT file stores the grades that students receive in the various sections they have completed, and the PREREQUISITE file stores the prerequisites of each course.





CREATE TABLE student(

s\_no int primary key, s\_name varchar(20) not null,

s\_class int,

s\_major varchar(10)

);

CREATE TABLE course(

c\_no varchar(10) primary key, c\_name varchar(50),

c\_credit int,

c\_dept varchar(20)

);

CREATE TABLE section(

s\_identity int primary key,

s\_cno varchar(20),

s\_sem varchar(10), s\_year varchar(5), s\_instructor varchar(20)

);

CREATE TABLE grade\_report( g\_sec\_identiy int primary key, g\_stud\_no int,

g\_grade varchar(10)

);

CREATE TABLE prerequisite(

p\_pre\_no varchar(20) primary key, p\_course\_no varchar(20)

);

INSERT INTO student VALUES(17,'smith',1,'cs'); INSERT INTO student VALUES(8,'brown',2,'cs');

INSERT INTO course VALUES('CS1310','Intro to computer science',4,'cs'); INSERT INTO course VALUES('CS3320','Date structures',4,'cs');

INSERT INTO course VALUES('MATH2410','Discrete Mathematics',3,'cs'); INSERT INTO course VALUES('CS3380','Database',3,'cs');

INSERT INTO section VALUES(85,'MATH2410','fall','07','king');

INSERT INTO section VALUES(92,'CS1310','fall','07','anderson');

INSERT INTO section VALUES(102,'CS3320','spring','08','knuth'); INSERT INTO section VALUES(112,'MATH2410','fall','08','chang');

INSERT INTO section VALUES(119,'CS1310','fall','08','anderson');

INSERT INTO section VALUES(135,'CS3380','fall','08','stone');

INSERT INTO grade\_report VALUES(112,17,'B'); INSERT INTO grade\_report VALUES(119,17,'C');

INSERT INTO grade\_report VALUES(85,8,'A'); INSERT INTO grade\_report VALUES(92,8,'A'); INSERT INTO grade\_report VALUES(102,8,'B'); INSERT INTO grade\_report VALUES(135,8,'A');

INSERT INTO prerequisite VALUES('CS3320','CS3380'); INSERT INTO prerequisite VALUES('MATH2410','CS3380'); INSERT INTO prerequisite VALUES('CS1310','CS3320');

1.List the prerequisites of the ‘Database’ course.

SELECT prerequisite.p\_pre\_no FROM prerequisite INNER JOIN course ON prerequisite.p\_course\_no=course.c\_no WHERE course.c\_name='Database';

2.Retrieve the names of all senior students majoring in‘CS’(computerscience). select s\_name from student where s\_major='CS' and s\_class=4;

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

SELECT course.c\_name FROM section INNER JOIN course ON section.s\_cno=course.c\_no WHERE section.s\_instructor='king' AND section.s\_year IN('07','08');

4. Delete therecord forthestudentwhose nameis ‘Smith’and whose student number is 17.

DELETE FROM student WHERE s\_name='smith' AND s\_no=17;

5.List the names of students who took the section of the ‘Database’ course oﬀered in fall 2008 and their grades in that section.

SELECT student.s\_name,grade\_report.g\_grade,course.c\_name FROM student INNER JOIN grade\_report ON student.s\_no=grade\_report.g\_stud\_no INNER JOIN section ON grade\_report.g\_sec\_identiy=section.s\_identity INNER JOIN course ON section.s\_cno=course.c\_no WHERE course.c\_name='Database' AND section.s\_sem='fall' AND section.s\_year='08';