16337341(朱志儒)数据库系统作业1

3.11

a.

SELECT DISTINCT name

FROM student NATURAL JOIN takes NATURAL JOIN course

WHERE title = 'Comp. Sci';

b.

SELECT ID, name

FROM student NATURAL JOIN takes

WHERE year > 2009 or year = 2009 and semester <> 'Spring';

c.

SELECT dept\_name, max(salary)

FROM instructor

GROUP BY dept\_name;

d.

SELECT min(max\_salary)

FROM (SELECT dept\_name, max(salary) AS max\_salary

FROM instructor

GROUP BY dept\_name);

3.12

a.

INSERT INTO course

VALUE('CS-001', 'Weekly Seminar', 'Comp. Sci', 0);

b.

INSERT INTO section

VALUE('CS-001', 1, 'Fall', 2009);

c.

INSERT INTO takes(ID, course\_id, sec\_id, semester, year)

SELECT ID, 'CS-001', 1, 'Fall', 2009

FROM student

WHERE dept\_name = 'Comp. Sci';

d.

DELETE FROM takes

WHERE ID IN (SELECT ID

FROM student

WHERE name = 'Chavez')

AND course\_id = 'CS-001';

e.

DELETE FROM course

WHERE course\_id = 'CS-001'

如果在运行此删除语句之前，没有先删除这门课程的授课信息，该删除操作将被系统拒绝。

f.

DELETE FROM takes

WHERE course\_id IN (SELECT course\_id

FROM course

WHERE title = '%database%');

3.21

a.

SELECT name

FROM member NATURAL JOIN borrowed NATURAL JOIN book

WHERE publisher = 'McGraw-Hill';

b.

SELECT S.name

FROM member AS S

WHERE NOT EXISTS ((SELECT isbn

FROM book

WHERE publisher = 'McGraw-Hill')

EXCEPT

(SELECT T.isbn

FROM borrowed AS T

WHERE S.memb\_no = T.memb\_no));

c.

SELECT M.name

FROM member M

WHERE 5 < (SELECT count(isbn)

FROM book NATURAL JOIN borrowed AS T

WHERE M.memb\_no = T.memb\_no

GROUP BY T.publisher);

d.

SELECT name, avg\_books

FROM member M, LATERAL (SELECT avg(isbn) AS avg\_books

FROM borrowed NATURAL JOIN book AS N

WHERE M.memb\_no = N.menb\_mo

GROUP BY memb\_no);

3.22

WHERE NOT EXISTS ((SELECT title FROM course) EXCEPT (SELECT DISTINCT title FROM course))