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Chapter 2 연습문제 (총 3문제; 2.10, 2.12, 2.13)

**2.10.**

No. Because there maybe two tuples for a single student, corresponding to two advisors, s\_id would not be a primary key.

The primary key should be s\_id, i\_id.

**2.12.**

a. PROJECT person\_name (SELECT company\_name = “First Bank Corporation”(works))

b. PROJECT person\_name, city (employee NATURAL JOIN (SELECT company\_name = “First Bank Corporation”(works)))

c. PROJECT person\_name, street, city (SELECT company\_name = “First Bank Corporation” UNION salary > 10000(works NATURAL JOIN employee))

**2.13.**

a. PROJECT loan\_number (SELECT amount > 10000(loan))

b. PROJECT customer\_name (SELECT balance > 6000 (depositer NATURAL JOIN account))

c. PROJECT customer\_name (SELECT balance > 6000 UNION branch\_name= “Uptown” (depositor NATURAL JOIN account))

Chapter 3 연습문제 (총 7문제; 3.11, 3.12, 3.14, 3.16, 3.20, 3.21, 3.24)

**3.11.**

a.

**select** **distinct** student.name

**from** student **natural join** takes **natural join** course

**where** course.dept\_name = ‘Comp.Sci.’

b.

**select** student.id, student.name

**from** student

**except**

**select** **distinct** student.id, student.name

**from** student, takes

**where** student.id=takes.id and semester= ‘Spring’ and year < 2009

c.

**select** dept\_name, max(salary)

**from** instructor

**group by** dept\_name

d.

**select min**(maximum\_salary)

**from** (**select** dept\_name, **max**(salary) **as** maximum\_salary)

**from** instructor

**group by** dept\_name

**3.12.**

a.

**insert into** course(course\_id, title, dept\_name, credits) **values** (‘CS-001’, ‘Weekly Seminar’, ‘Comp.Sci’, 0)

b.

**insert into** section(course\_di, sec\_id, semester, YEAR) **values** (‘CS-001’, ‘1’, ‘Autumn’, 2009)

c.

**insert into** takes(ID, course\_id, sec\_id, semester, YEAR)

**select** id, ‘CS-001’, ‘1’, ‘Autumn’, ‘2009’

**from** student

**where** dept\_name = ‘Comp.Sci’

d.

**delete from** takes

**where** (course\_id = ‘CS-001’) **and** (sec\_id = ‘1’) **and** (semester = ‘Autumn’) **and** (year = 2009) **and** (ID **in** (

**select** ID

**from** student

**where** name = ‘Chavez’

)

)

e.

**delete from** course

**where** course\_id = ‘CS-001’

no error, when deleting ‘CS-001’ in section, the tuple of section with course\_id ‘CS-001’ was automatically deleted.

f.

**delete from** takes

**where** course\_id **in**(

**select** course\_id

**from** course

**where** **lower**(title) **like** ‘%database%’)

**3.14**

a.

**select count** (report\_number)

**from** accident

**where** driver\_id = “John Smith”

b.

**update** participated

**set** damage\_amount = $3000

**where** license = “AABB2000” **and** report\_number = “AR2197”

**3.16**

a.

**select** employee\_name

**from** works

**where** company\_name = “First Bank Corporation”

b.

**select** employee.employee\_name

**from** employee, company

**where** company.city = employee.city

c.

**select** E.employee\_name

**from** employee E, employee L, manager M

**where** E.employee\_name = M.employee\_name **and** M.manager\_name = L.employ\_name **and** E.street = L.street **and** E.city = L.city

**3.20**

create domain company names char(20)

create domain city names char(20)

create domain person names char(20)

create table employ(

employee\_name employee\_name,

street char(30),

city city,

primary key (employee\_name)

)

create table works(

employee\_name employee\_name,

company\_name company\_name,

salary number(4),

primary key (employee\_name)

)

create table company(

company\_name company\_name,

city city,

primary key (company\_name)

)

create table manages(

employee\_name employee\_name,

manager\_name manager\_name,

primary key (employee\_name)

)

**3.21.**

a.

**select** name

**from** member, book, borrowed

**where** member.memb\_no = borrowed.memb\_no

**and** borrowed.isbn = book.isbn **and**

book.publisher = ‘McGrawHill’

b.

**select distinct** member.name

**from** member

**where not exists**

((**select** isbn

**from** book

**where** publisher = ‘McGrawHill’)

**except**

(**select** isbn

**from** borrowed

**where** borrowed.memb\_no = member.memb\_no))

c.

**selec**t name

**from** member, borrowed

**where** member.memb\_no = borrowed.memb\_no **and** isbn **in**

( **select distinct** isbn

**from** book

**where** publisher = 'McGraw-Hill')

**group by** member.memb\_no, name

**having** **count**(isbn) >=5

d.

**select avg**(cnt) **from**

(

**select** count(isbn), memb\_no **from** borrowed **group by** memb\_no **union**

**select** 0, memb\_no **from** member **where not exists**

(**select** isbn **from** borrowed **where** borrowed.memb\_no = member.memb\_no)

) **as** book\_count(cnt, memb\_no)

**3.24**

**select** **distinct** dept \_name

**from** instructor

**where** (**select** **sum**(salary)

**from** instructor

**where** department d) >=

 (**select avg**(s)

**from** (**select** **sum**(salary) **as**

**from** instructor **group by** department))