

Jackie Diep

Assignment 2

CSC 411 G001

3/7/21

- **Chapter 3**

**3.12)**

- a. **insert into** *course*  
    **values** ('CS-001', 'Weekly Seminar', 'Comp. Sci.', 4);
- b. **insert into** *section*  
    **values** ('CS-001', '1', 'Fall', '2017', 'NULL');
- c. **insert into** *takes*  
    **values** (**select** ID, 'CS-001', '1', 'Fall', '2017' **from** student **where** dept\_name =  
    'Comp. Sci.');
- d. **delete from** *takes*  
    **where** ID = '12345'
- e. **delete from** *course*  
    **where** course\_id = "CS-001";

Instances of "CS-001" from *section* and *takes* will still be deleted because they inherit the foreign key of "course\_id" from *course*

- f. **delete from** *takes*  
    **where** course\_id  
    **in** (**select** course\_id **from** *course* **where** **lower**(title) **like** '%advanced%');

**3.15)**

- a. **select distinct** A.customer\_name **from** *depositor* A **where not exists**((  
    **select** branch\_name **from** *branch* **where** branch\_city = 'Brooklyn')  
    **except** (**select** B.branch\_name **from** *depositor* C, *account* B  
    **where** C.account\_number = B.account\_number  
    **and** A.customer\_name = C.customer\_name)
- b. **select sum** (amount)  
    **from** *loan*
- c. **select** branch\_name **from** *branch* **where** assets > **some**(  
    **select** asset **from** *branch* **where** branch\_city = 'Brooklyn')

**3.17)**

- a. **update** *works* **set** salary = salary \* 1.10  
    **where** company\_name = 'First Bank Corporation'
- b. **update** *works* **set** salary = salary \* 1.10  
    **where** ID **in**  
    (**select** manager\_id **from** *manages*)  
    **and** company\_name = 'First Bank Corporation'

**c. delete works**

**where** company\_name = 'Small Bank Corporation'

**3.18)**

**create table** *employee* (

ID varchar(10) not null,  
person\_name varchar(15) not null,  
street varchar(15) not null,  
city varchar(15) not null,  
**primary key** (ID));

**create table** *works* (

ID varchar(10) not null,  
company\_name varchar(15) not null,  
salary numeric(8, 2) not null,  
**primary key** (ID),  
**foreign key** (ID) **reference** *employee*(ID));

**create table** *company* (

company\_name varchar(15) not null,  
city varchar(15) not null,  
**primary key** (company\_name),  
**foreign key** (company\_name) **reference** *works*(company\_name));

**create table** *manages* (

ID varchar(10) not null,  
manager\_id(10) not null,  
**primary key** (ID),  
**foreign key** (ID) **reference** *employee*(ID));

**3.21)**

**a. select** name, memb\_no **from** *member* **natural join** *borrowed*

**where** isbn in (**select** isbn  
**from** *book*  
**where** publisher = 'McGraw-Hill'  
);

**b. select** name, memb\_no **from** *member* **a where not exists** ((  
**select** isbn **from** *book* **where** publisher = 'McGraw-Hill')  
**except** (**select** isbn **from** *member* **natural join** *borrowed*  
**where** a.memb\_no = memb\_no);

**c. select** name, memb\_no **from** *member* **natural join** *borrowed* **natural join** *book*  
**group by** memb\_no, name, publisher **having count** (isbn) > 5;

**d. select sum** (avgbooks) **count** (memb\_no) **from** (**select** memb\_no,  
(**select count**(\*) **from** *borrowed* **where** *member* memb\_no = *borrowed*  
memb\_no) avgbooks **from** *member*);

**3.25)**

**select** dept.dept\_name,dept.budget **from** depart dphil,depart dept

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where dphil.dept_name='philosophy' and dept.budget>dphil.budget
order by dept.dept_name desc;
```

3.28)

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select ins.ID as ID, ins.dept_name as department from instructor ins join teaches tea
on ins.ID = tea.ID group by ins.ID, ins.dept_name having count(*) =
(select count (distinct course_id) from course cse where cse.dept_name =
ins.dept_name) order by name;
```

3.31)

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select ID, name from instructor where ID not in(
select ID from teaches, section
where teaches.course_id = section.course_id
and teaches.sec_id = section.sec_id
and teaches.semester = section.semester
and teaches.year = section.year and grade = 'A');
```

3.35)

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with temporaryTable as (
select course_id, sec_id, year, semester, count(ID) as num from section
natural join takes group by course_id, sec_id, year, semester)
select course_id, sec_id from temporaryTable
where num = (select max(num) from temporaryTable);
```