Charlie Schatmeyer - IE6700 HW4

1.
7.10E

```
create view SUPPLIEROVERVIEW as
select supnr, supname, supstatus
from supplier

select * from supplieroverview
where supstatus > 30
```

7.16E

```
select prodnr
from product p1
where (
        select count(distinct p2.prodnr)
        from product p2
        where p2.prodnr < p1.prodnr
) < 3
order by prodnr
```

7.17E

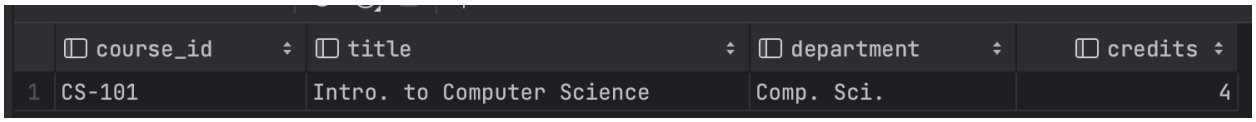
```
select prodname
from product
where available_quantity >= ALL (select available_quantity from product)
-- limit 1 can be added to end if specifically only 1 name requested
```

7.18E

```
select supnr, supname
from supplier s1
where not exists (
   select 1
   from supplier s2
   where s2.SUPNR < s1.SUPNR
)
```

2.

```
WITH RECURSIVE PrerequisiteCourses AS (
   SELECT p.prereq_id AS course_id, c.title, c.dept_name AS department, c.credits
   FROM prereq p
   JOIN course c ON p.prereq_id = c.course_id
   WHERE p.course_id = 'CS-347'
   UNION ALL
   SELECT p.prereq_id AS course_id,c.title,c.dept_name AS department,c.credits
   FROM prereq p
   JOIN course c ON p.prereq_id = c.course_id
   JOIN PrerequisiteCourses pc ON p.course_id = pc.course_id
)
SELECT *
FROM PrerequisiteCourses;
```



	course_id	title	department	credits
1	CS-101	Intro. to Computer Science	Comp. Sci.	4

3.

```
SELECT s.course_id, c.title, COUNT(*) AS number_of_sections
FROM section s
JOIN course c ON s.course_id = c.course_id
WHERE s.semester = 'Spring'
GROUP BY s.course_id, c.title
ORDER BY number_of_sections DESC
LIMIT 1;
```

	course_id	title	number_of_sections
1	CS-190	Game Design	2

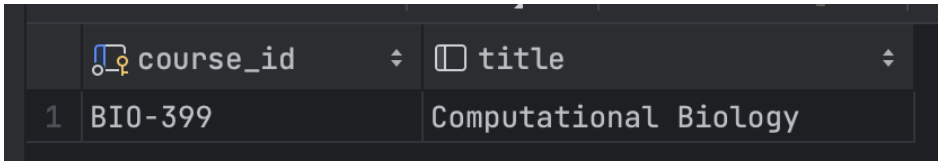
4.

```
SELECT DISTINCT t1.course_id
FROM takes t1
WHERE 5 > (
    SELECT COUNT(DISTINCT t2.course_id)
    FROM takes t2
    WHERE (
        SELECT COUNT(*) FROM takes t3 WHERE t3.course_id = t2.course_id
    ) > (
        SELECT COUNT(*) FROM takes t3 WHERE t3.course_id = t1.course_id
    )
);
```

	course_id
1	CS-001
2	CS-101
3	CS-190
4	CS-315
5	CS-319
6	CS-347

5.

```
SELECT c.course_id, c.title
FROM course c
WHERE NOT EXISTS (
    SELECT 1
    FROM section s
    WHERE s.course_id = c.course_id
);
```



	course_id	title
1	BIO-399	Computational Biology

6.

```
SELECT *
FROM student
WHERE tot_cred > (
    SELECT AVG(tot_cred)
    FROM student
);
```

	ID	name	dept_name	tot_cred
1	00128	Zhang	Comp. Sci.	102
2	19991	Brandt	History	80
3	23121	Chavez	Finance	110
4	98765	Bourikas	Elec. Eng.	98
5	98988	Tanaka	Biology	120

7.

```
SELECT t.course_id, t.sec_id, t.semester, t.year
FROM teaches t
WHERE t.ID IN (
    SELECT i.ID
    FROM instructor i
    WHERE i.salary > (
        SELECT AVG(salary)
        FROM instructor
    )
);
```

	course_id	sec_id	semester	year
1	FIN-201	1	Spring	2018
2	PHY-101	1	Fall	2017
3	CS-101	1	Spring	2018
4	CS-319	1	Spring	2018
5	CS-190	1	Spring	2017
6	CS-190	2	Spring	2017
7	CS-319	2	Spring	2018
8	EE-181	1	Spring	2017