2.

```
select distinct ID
from takes
```

	id character varying (5)
1	76653
2	19991
3	76543
4	54321
5	44553
6	55739
7	45678
8	12345
9	98988
10	98765
11	00128
12	23121

2.2

```
select distinct ID as instructor_ID, name
from instructor
```

	instructor_id character varying (5)	name character varying (20)
1	32343	El Said
2	10101	Srinivasan
3	33456	Gold
4	76766	Crick
5	98345	Kim
6	83821	Brandt
7	45565	Katz
8	15151	Mozart
9	12121	Wu
10	22222	Einstein
11	76543	Singh
12	58583	Califieri

2.3

```
select distinct dept_name
from department
```

3.1

```
select distinct S.ID as student_ID,
                S.name,
                count(S.ID) as number_of_Comp_Sci_courses
from student S
inner join takes T
on S.ID = T.ID
inner join course C
on T.course_id = C.course_id
where C.dept_name = 'Comp. Sci.'
group by S.ID
```

3.2

```
select distinct S.ID as student_ID,
                S.name,
                C.title,
                T.grade
from student S
inner join takes T
on S.ID = T.ID
inner join course C
on T.course_id = C.course_id
where C.dept_name = 'Comp. Sci.'
```

3.3

```
select distinct s.ID as student_ID,
                s.name
from student s
where s.ID not in
(
    select distinct S.ID
    from student S
    inner join takes T
    on S.ID = T.ID
    where T.year < 2017);
```

3.4

```
select dept_name, max(I.salary) as maximum_salary
from instructor I
group by dept_name
```

3.5

```
select max(I.salary) as maximum_salary
from instructor I
group by dept_name
order by maximum_salary
limit 1
```

3.6

```
select dept_name,
max(I.salary) as maximum_salary
from instructor I
group by dept_name
order by maximum_salary
limit 1
```

4.1

```
select ID, name
from instructor
where ID NOT IN
(select distinct instructor.ID
from instructor, teaches, takes
where instructor.ID = teaches.ID
    and teaches.course_id = takes.course_id
    and teaches.year = takes.year
    and teaches.semester= takes.semester
    and teaches.sec_id= takes.sec_id
    and takes.grade = 'A')
order by ID ASC;
```

5.

```
select distinct Se.course_id, Se.sec_id,
        Se.year, Se.semester,
        count(S.ID) as number_of_students
from section Se
inner join takes Ta
on Ta.course_id = Se.course_id
    and Ta.sec_id = Se.sec_id
    and Ta.semester = Se.semester
    and Ta.year = Se.year
inner join Student S
on Ta.ID = S.ID
group by (Se.course_id, Se.sec_id, Se.year, Se.semester)
```