

[COSE371 Database]

Lab - SQL 1

2019320137

컴퓨터학과 황상민

Exercise 1.

a.

```
SQL Shell (psql)
practice1=# select title from course where dept_name='Comp. Sci.' and credits=3;
      title
-----
Robotics
Image Processing
Database System Concepts
(3개 행)

practice1=#
```

b.

```
SQL Shell (psql)
practice1=# select distinct takes.id from takes, teaches, instructor where (takes.course_id, takes.sec_id, takes.semester, takes.year)=(teaches.course_id, teaches.sec_id, teaches.semester, teaches.year) and (teaches.id=instructor.id) and instructor.name='Srinivasan';
      id
-----
00128
12345
45678
54321
76543
98765
(6개 행)

practice1=#
```

c.

```
SQL Shell (psql)
practice1=# select max(salary) from instructor;
      max
-----
95000.00
(1개 행)

practice1=#
```

d.

```
SQL Shell (psql)
practice1=# select course_id, sec_id, count(id) from takes where semester='Fall' and year=2017 group by course_id, sec_id;
 course_id | sec_id | count
-----
CS-101 | 1 | 6
CS-347 | 1 | 2
PHY-101 | 1 | 1
(3개 행)

practice1=#
```

Exercise 2

a.

```
SQL Shell (psql)

practice1=# select sum(points * credits) from takes, course, grade_points where id='12345' and takes
.course_id=course.course_id and takes.grade=grade_points.grade;
sum
-----
48.0
(1개 행)

practice1=#
```

b.

```
SQL Shell (psql)

practice1=# select sum(points * credits) / sum(credits) as GPA from takes, course, grade_points wher
e id='12345' and takes.course_id=course.course_id and takes.grade=grade_points.grade;
gpa
-----
3.4285714285714286
(1개 행)

practice1=#
```

c.

```
SQL Shell (psql)

practice1=# select id, sum(points * credits) / sum(credits) as GPA from takes, course, grade_points
where takes.course_id=course.course_id and takes.grade=grade_points.grade group by id;
id | gpa
---+---
76653 | 2.0000000000000000
19991 | 3.0000000000000000
76543 | 4.0000000000000000
54321 | 3.5000000000000000
44553 | 2.7000000000000000
55739 | 3.7000000000000000
45678 | 2.0181818181818182
12345 | 3.4285714285714286
98988 | 4.0000000000000000
98765 | 2.2571428571428571
00128 | 3.8714285714285714
23121 | 2.3000000000000000
(12개 행)
```

d.

```
SQL Shell (psql)

practice1=# select id, sum(points * credits) / sum(credits) as GPA from takes, course, grade_points
where takes.course_id=course.course_id and takes.grade=grade_points.grade group by id having sum(poi
nts*credits)/sum(credits) > 3.0;
id | gpa
---+---
76543 | 4.0000000000000000
54321 | 3.5000000000000000
55739 | 3.7000000000000000
12345 | 3.4285714285714286
98988 | 4.0000000000000000
00128 | 3.8714285714285714
(6개 행)

practice1=#
```