ASSIGNMENT 1: BASIC SQL

❖ **Statement: Write the simple SQL queries on the given schema.**

A. Write the following simple SQL Queries on the University Schema.

1. **Find the names of all the students whose total credits are greater than 100.**
   Query: SELECT name, tot cred From student WHERE tot cred > 100;

   Output:

NAME
Zhang
Chavez
Tanaka

```
mysql> select name from student where tot_cred > 100;
+--------+
| name   |
+--------+
| Zhang  |
| Chavez |
| Tanaka |
+--------+
3 rows in set (0.00 sec)
```

2. **Find the course id and grades of all courses taken by any student named 'Tanaka'.**
   Query: SELECT course_id, grade from takes where id(select id from student where name='Tanaka');

   Output:

COURSE_ID	GR
BIO-101	A
BIO-301	NULL

```
mysql> select course_id,grade from takes where id =(select id from student where name='Tanaka');
+-----------+-------+
| course_id | grade |
+-----------+-------+
| BIO-101   | A     |
| BIO-301   | NULL  |
+-----------+-------+
2 rows in set (0.00 sec)
```

3. **Find the courses which are offered in both 'Fall' and 'Spring' semester (not necessarily in the same year).**

   Query: select course_id, title from course where course_id=(select course_id from teaches as F where semester='Fall' and exists(select* from teaches as S where semester='Spring' and F.course_id=S.course_id));

   Output:

COURSE_Id	TITLE
CS-101	Intro. to Computer Science

```
mysql> select course_id, title from course where course_id=(select course_id from
    -> teaches as F where semester='Fall' and exists(select * from teaches as S where
    -> semester='Spring' and F.course_id=S.course_id));
+-----------+----------------------------+
| course_id | title                      |
+-----------+----------------------------+
| CS-101    | Intro. to Computer Science |
+-----------+----------------------------+
1 row in set (0.00 sec)
```

4. **Find the names of all the instructors from Comp. Sci. department.**

Query: select name from instructor where dept_name = 'Comp. Sci.';

Output:

NAME
Srinivasan
Katz
Brandt

```
mysql> select name from instructor where dept_name = 'Comp. Sci.';
+------------+
| name       |
+------------+
| Srinivasan |
| Katz       |
| Brandt     |
+------------+
3 rows in set (0.00 sec)
```

5. **Find the course id and titles of all courses taught by an instructor named 'Srinivasan'**

Query: select course.course_id, course.title from course where course.course_id=some(select teaches.course_id from teaches where teaches.id=(select instructor.id from instructor where instructor.name=='Srinivasan'));

Output:

COURSE_Id	TITLE
CS-101	Intro. to Computer Science
CS-315	Robotics
CS-347	Database System Concepts

```
mysql> select course.course_id,course.title from course where
    -> course.course_id=some(select teaches.course_id from teaches where
    -> teaches.id=(select instructor.id from instructor where instructor.name='Srinivasan'));
+-----------+--------------------------+
| course_id | title                    |
+-----------+--------------------------+
| CS-101    | Intro. to Computer Science |
| CS-315    | Robotics                 |
| CS-347    | Database System Concepts |
+-----------+--------------------------+
3 rows in set (0.00 sec)
```

6. **Find the names of instructors who have taught at least one course in Spring 2009.**

Query: select o.name,i.semester,i.year from instructor o inner join teaches i on o.ID=i.ID where i.semester = 'Spring' and i.year = '2009';

Output:

NAME
Brandt
Brandt
Kim

```
mysql> select o.name,i.semester,i.year from instructor o inner join teaches i on o.ID=i.ID where i.semester = 'Spring' and i.year = '2009';
+--------+----------+------+
| name   | semester | year |
+--------+----------+------+
| Brandt | Spring   | 2009 |
| Brandt | Spring   | 2009 |
| Kim    | Spring   | 2009 |
+--------+----------+------+
3 rows in set (1.62 sec)

mysql>
```