

Nhat Doan

CSC134 (M-W-F 10:00 - 10: 50)

Assignment #5 - Output of queries

1> ---Query 1: Retrieve information (SSN, first name and last name) about students who took the course 'Computer Architecture' ("Computer Architecture" is a course name).

```
SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME
FROM STUDENT AS S , TAKES AS T, COURSE AS C
WHERE T.SSN = S.SSN AND T.COURSENO= C.COURSENO AND C.COURSE_NAME =
"Computer Architecture";
```

```
mysql> SELECT * FROM TAKES;
+-----+-----+-----+-----+-----+
| SSN      | COURSENO | SECTIONNO | EXAMNO | RESULTS |
+-----+-----+-----+-----+-----+
| 123456789 | CSC15    | 01        | 01     | A       |
| 123456789 | CSC13    | 02        | 01     | B       |
| 987654321 | CSC13    | 02        | 01     | A       |
| 987654321 | CSC14    | 02        | 02     | A       |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME
-> FROM STUDENT AS S , TAKES AS T, COURSE AS C
-> WHERE T.SSN = S.SSN AND T.COURSENO= C.COURSENO AND C.COURSE_NAME = "Computer Architecture";
+-----+-----+-----+
| SSN      | FIRST_NAME | LAST_NAME |
+-----+-----+-----+
| 123456789 | NHAT       | DOAN      |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM COURSE;
+-----+-----+-----+
| COURSENO | COURSE_NAME      | DEPARTMENT |
+-----+-----+-----+
| CSC11    | ADVANCE PROGRAMMING | CSC        |
| CSC12    | DATA STRUCTURE    | CSC        |
| CSC13    | VLSI               | VLSI       |
| CSC14    | Calculus           | MATH       |
| CSC15    | Computer Architecture | CSC        |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

2>--Query 2: Get the information (SSN, first name and last name) about students who have taken the course 'VLSI'. Also get course number and the section number in which they have enrolled in the course.

```
SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME , E.COURSENO , E.SECTIONNO
FROM STUDENT AS S , TAKES AS T, COURSE AS C, ENROLLS AS E
WHERE S.SSN = E.SSN AND E.COURSENO = C.COURSENO AND T.SSN = S.SSN AND
T.COURSENO= C.COURSENO AND C.COURSE_NAME = "VLSI";
```

```
mysql> SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME , E.COURSENO , E.SECTIONNO
-> FROM STUDENT AS S , TAKES AS T, COURSE AS C, ENROLLS AS E
-> WHERE S.SSN = E.SSN AND E.COURSENO = C.COURSENO AND T.SSN = S.SSN AND T.COURSENO= C.COURSENO AND C.COURSE_NAME
= "VLSI";
```

SSN	FIRST_NAME	LAST_NAME	COURSENO	SECTIONNO
123456789	NHAT	DOAN	CSC13	02

1 row in set (0.00 sec)

3>--Query 3: Get the course names and course numbers which have 2 or more students.

```
SELECT C.COURSE_NAME, C.COURSENO
FROM ENROLLS AS E, COURSE AS C
WHERE E.COURSENO = C.COURSENO
GROUP BY COURSENO
HAVING COUNT(E.SSN) > 1;
```

```
mysql> SELECT C.COURSE_NAME, C.COURSENO
-> FROM ENROLLS AS E, COURSE AS C
-> WHERE E.COURSENO = C.COURSENO
-> GROUP BY COURSENO
-> HAVING COUNT(E.SSN) > 1;
```

COURSE_NAME	COURSENO
ADVANCE PROGRAMMING	CSC11
DATA STRUCTURE	CSC12
Computer Architecture	CSC15

3 rows in set (0.00 sec)

```
mysql> select * from ENROLLS;
```

SSN	COURSENO	SECTIONNO
123456789	CSC11	02
987654321	CSC11	01
123456789	CSC12	01
987654321	CSC12	02
123456789	CSC13	02
987654321	CSC14	02
123456789	CSC15	01
987654321	CSC15	01

8 rows in set (0.00 sec)

4>--Query 4: Retrieve the information (SSN, first name and last name) of students who got Grade 'A' in at least two exams.

```
SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME
FROM STUDENT AS S, TAKES AS T
WHERE T.RESULTS = "A" AND T.SSN = S.SSN
GROUP BY T.SSN
HAVING COUNT(T.RESULTS) > 1;
```

```
mysql> SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME
-> FROM STUDENT AS S, TAKES AS T
-> WHERE T.RESULTS = "A" AND T.SSN = S.SSN
-> GROUP BY T.SSN
-> HAVING COUNT(T.RESULTS) > 1;
```

SSN	FIRST_NAME	LAST_NAME
987654321	TUAN	NGUYEN

1 row in set (0.00 sec)

```
mysql> select * from TAKES;
```

SSN	COURSENO	SECTIONNO	EXAMNO	RESULTS
123456789	CSC15	01	01	A
123456789	CSC13	02	01	B
987654321	CSC13	02	01	A
987654321	CSC14	02	02	A

4 rows in set (0.00 sec)

5>--Query 5:Obtain information (exam number, course number and section number) about the exams taking place in building 'Riverside Hall'. Along with that get the room's capacity, room number and its building name.

```
SELECT C.EXAMNO, C.COURSENO, C.SECTIONNO, M.CAPACITY, M.ROOMNO,
M.BUILDING
FROM CONDUCT_IN AS C, CLASS_ROOM AS M
WHERE C.BUILDING = "RIVERSIDE HALL" AND M.BUILDING = C.BUILDING AND
M.ROOMNO= C.ROOMNO;
```

```
mysql> SELECT C.EXAMNO, C.COURSENO, C.SECTIONNO, M.CAPACITY, M.ROOMNO, M.BUILDING
-> FROM CONDUCT_IN AS C, CLASS_ROOM AS M
-> WHERE C.BUILDING = "RIVERSIDE HALL" AND M.BUILDING = C.BUILDING AND M.ROOMNO= C.ROOMNO;
```

EXAMNO	COURSENO	SECTIONNO	CAPACITY	ROOMNO	BUILDING
01	CSC13	02	200	1029	RIVERSIDE HALL
02	CSC14	02	45	5029	RIVERSIDE HALL

2 rows in set (0.00 sec)

6>--Query 6:Retrieve information (SSN, first name and last name) about students who are enrolled in the course of 'CSC11' or 'CSC12' ('CSC11' and 'CSC12' are course numbers).
Note: MySQL does not support "INTERSECT".

```
SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME, E.COURSENO
FROM STUDENT AS S INNER JOIN ENROLLS AS E ON S.SSN = E.SSN
WHERE E.COURSENO= "CSC11" OR E.COURSENO= "CSC12";
```

```
mysql> SELECT S.SSN, S.FIRST_NAME, S.LAST_NAME, E.COURSENO
-> FROM STUDENT AS S INNER JOIN ENROLLS AS E ON S.SSN = E.SSN
-> WHERE E.COURSENO= "CSC11" OR E.COURSENO= "CSC12";
```

SSN	FIRST_NAME	LAST_NAME	COURSENO
123456789	NHAT	DOAN	CSC12
123456789	NHAT	DOAN	CSC11
987654321	TUAN	NGUYEN	CSC11
987654321	TUAN	NGUYEN	CSC12

4 rows in set (0.00 sec)

NOTE: COURSENO is an extra column for clarification of different students taking different courses.

7> --Query 7: Retrieve the courses that have more than 2 sections. (List course name and number of sections)

```
SELECT C.COURSE_NAME, COUNT(S.SECTIONNO)
FROM COURSE AS C, SECTION AS S
WHERE C.COURSENO = S.COURSENO
GROUP BY S.COURSENO
HAVING COUNT(S.SECTIONNO) > 1;
```

```
mysql> SELECT C.COURSE_NAME, COUNT(S.SECTIONNO)
-> FROM COURSE AS C, SECTION AS S
-> WHERE C.COURSENO = S.COURSENO
-> GROUP BY S.COURSENO
-> HAVING COUNT(S.SECTIONNO) > 1;
```

COURSE_NAME	COUNT(S.SECTIONNO)
ADVANCE PROGRAMMING	2
DATA STRUCTURE	2

2 rows in set (0.00 sec)

```
mysql> select * from SECTION;
```

COURSENO	SECTIONNO
CSC11	01
CSC11	02
CSC12	01
CSC12	02
CSC13	02
CSC14	02
CSC15	01

7 rows in set (0.00 sec)

8>

--Query 8: Retrieve all the exams that are conducted in RVR 1002. "RVR" is build name and "1002" is roomNo. Retrieve the following information: Building, RoomNo, Capacity, CourseNo, SectionNo, ExamNo. If a classroom has no exam at all, display CourseNo, SectionNo, ExamNo with a NULL value.

```
SELECT C.EXAMNO, C.COURSENO, C.SECTIONNO, M.CAPACITY, M.ROOMNO,
M.BUILDING
FROM CONDUCT_IN AS C RIGHT OUTER JOIN CLASS_ROOM AS M ON
C.ROOMNO=M.ROOMNO
WHERE M.BUILDING = "RVS" AND M.ROOMNO="1002";
```

```
mysql> SELECT C.EXAMNO, C.COURSENO, C.SECTIONNO, M.CAPACITY, M.ROOMNO, M.BUILDING
-> FROM CONDUCT_IN AS C RIGHT OUTER JOIN CLASS_ROOM AS M ON C.ROOMNO=M.ROOMNO
-> WHERE M.BUILDING = "RVS" AND M.ROOMNO="1002";
```

```
+-----+-----+-----+-----+-----+-----+
| EXAMNO | COURSENO | SECTIONNO | CAPACITY | ROOMNO | BUILDING |
+-----+-----+-----+-----+-----+-----+
| NULL   | NULL     | NULL      | 50       | 1002   | RVS      |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```