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COMP 3421

Assignment #5

<u>Three way join</u>

mysql> select * from courses C, enrolled_in E, students S

   -> where C.course_id=E.course_id and S.sid=E.sid and E.term='Fall2021' and S.sid<10;

```
+-----------+------------+---------+-----+-----------+----------+-----+-------+---------+---------------------------+-----------+-------------+
| course_id | name       | credits | sid | course_id | term     | sid | grade | name    | contact_information       | address     |
+-----------+------------+---------+-----+-----------+----------+-----+-------+---------+---------------------------+-----------+-------------+
```

| 611 | course611 | 3 | 1 | 611 | Fall2021 | 1 | 10 | student1 | student1@medford.student.edu | 236 Stuyvestant Avenue |

| 1302 | course1302 | 4 | 2 | 1302 | Fall2021 | 2 | 9 | student2 | student2@medford.student.edu | 73 Stuyvestant Avenue |

| 716 | course716 | 3 | 2 | 716 | Fall2021 | 2 | 9 | student2 | student2@medford.student.edu | 73 Stuyvestant Avenue |

| 1070 | course1070 | 4 | 3 | 1070 | Fall2021 | 3 | 12 | student3 | student3@medford.student.edu | 906 Stuyvestant Avenue |

| 1334 | course1334 | 3 | 3 | 1334 | Fall2021 | 3 | 12 | student3 | student3@medford.student.edu | 906 Stuyvestant Avenue |

| 1111 | course1111 | 4 | 3 | 1111 | Fall2021 | 3 | 12 | student3 | student3@medford.student.edu | 906 Stuyvestant Avenue |

| 393 | course393 | 3 | 5 | 393 | Fall2021 | 5 | 12 | student5 | student5@medford.student.edu | 961 Stuyvestant Avenue |

| 471 | course471 | 3 | 9 | 471 | Fall2021 | 9 | 11 | student9 | student9@medford.student.edu | 282 Stuyvestant Avenue |

```
+-----------+------------+---------+-----+-----------+----------+-----+-------+---------+---------------------------+-----------+-------------+
```

8 rows in set (0.10 sec)

Aggregate with Group by

mysql> select S.grade,AVG(credits)

    -> from students S, courses C

    -> group by S.grade;

+-------+--------------+

| grade | AVG(credits) |

+-------+--------------+

| 10 | 3.515 |

| 9 | 3.515 |

| 12 | 3.515 |

| 11 | 3.515 |

+-------+--------------+

4 rows in set (3.34 sec)

Aggregate with Group by & Having

mysql> select E.term, AVG(credits)

    -> from enrolled_in E, courses C where C.course_id<120

    -> group by E.term

    -> having count(*) >10;

+------------+--------------------+

| term | AVG(credits) |

+------------+--------------------+

| Fall2022 | 3.4210526315789473 |

| Spring2020 | 3.4210526315789473 |

| Spring2021 | 3.4210526315789473 |

| Fall2021 | 3.4210526315789473 |

| Spring2022 | 3.4210526315789473 |

| Fall2023 | 3.4210526315789473 |

| Spring2023 | 3.4210526315789473 |

| Fall2020 | 3.4210526315789473 |

+------------+--------------------+

8 rows in set (1.02 sec)

Simple Insert

mysql> select * from courses where course_id < 110;

+-----------+-----------+---------+

| course_id | name | credits |

+-----------+-----------+---------+

| 101 | course101 | 3 |

| 102 | course102 | 3 |

| 103 | course103 | 3 |

| 104 | course104 | 3 |

| 105 | course105 | 3 |

| 106 | course106 | 3 |

| 107 | course107 | 3 |

| 108 | course108 | 4 |

| 109 | course109 | 4 |

+-----------+-----------+---------+

9 rows in set (0.01 sec)

mysql> insert into courses values(100, 'course100', 5);

Query OK, 1 row affected (0.41 sec)

mysql> select * from courses where course_id < 110;

+-----------+-----------+---------+

| course_id | name | credits |

+-----------+-----------+---------+

| 100 | course100 | 5 |

```
| 101      | course101 |     3 |

| 102      | course102 |     3 |

| 103      | course103 |     3 |

| 104      | course104 |     3 |

| 105      | course105 |     3 |

| 106      | course106 |     3 |

| 107      | course107 |     3 |

| 108      | course108 |     4 |

| 109      | course109 |     4 |

+----------+----------+---------+
```

10 rows in set (0.01 sec)

Simple update

mysql> select * from students where sid=10;

```
+-----+-------+-----------+----------------------------+-----------------------+
| sid | grade | name      | contact_information        | address               |
+-----+-------+-----------+----------------------------+-----------------------+
|  10 |    11 | student10 | student10@medford.student.edu | 277 Stuyvestant Avenue |
+-----+-------+-----------+----------------------------+-----------------------+
```

1 row in set (0.00 sec)

mysql> update students

   -> set address = '38 Donworryaboutit Boulevard'

   -> where sid=10;

Query OK, 1 row affected (0.20 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from students where sid=10;

```
+-----+-------+-----------+----------------------------+----------------------------+
```

```
| sid | grade | name     | contact_information      | address                |

+-----+-------+-----------+-----------------------------+----------------------------+

| 10 |   11 | student10 | student10@medford.student.edu | 38 Donworryaboutit Boulevard |

+-----+-------+-----------+-----------------------------+----------------------------+
```

1 row in set (0.00 sec)

Multiple tuple update

mysql> select * from courses where course_id<120 ;

```
+-----------+-----------+---------+

| course_id | name      | credits |

+-----------+-----------+---------+

| 100       | course100 |     5 |

| 101       | course101 |     3 |

| 102       | course102 |     3 |

| 103       | course103 |     3 |

| 104       | course104 |     3 |

| 105       | course105 |     3 |

| 106       | course106 |     3 |

| 107       | course107 |     3 |

| 108       | course108 |     4 |

| 109       | course109 |     4 |

| 110       | course110 |     3 |

| 111       | course111 |     4 |

| 112       | course112 |     3 |

| 113       | course113 |     4 |

| 114       | course114 |     3 |

| 115       | course115 |     4 |

| 116       | course116 |     3 |

| 117       | course117 |     4 |
```

| 118 | course118 | 4 |
| 119 | course119 | 4 |

+-----------+-----------+---------+

20 rows in set (0.01 sec)

mysql> update courses

   -> set credits=credits-.5 where course_id<110;

Query OK, 10 rows affected (0.18 sec)

Rows matched: 10 Changed: 10 Warnings: 0

mysql> select * from courses where course_id<120 ;

+-----------+-----------+---------+

| course_id | name | credits |

+-----------+-----------+---------+

100	course100	4.5
101	course101	2.5
102	course102	2.5
103	course103	2.5
104	course104	2.5
105	course105	2.5
106	course106	2.5
107	course107	2.5
108	course108	3.5
109	course109	3.5
110	course110	3
111	course111	4
112	course112	3
113	course113	4
114	course114	3

```
| 115     | course115 |     4 |

| 116     | course116 |     3 |

| 117     | course117 |     4 |

| 118     | course118 |     4 |

| 119     | course119 |     4 |

+-----------+-----------+---------+
```

20 rows in set (0.01 sec)