Step 4 of Your PDA

Note: this assignment is a slight modification of material developed by the Stanford Database Group

**(15 pts.)** Write three queries on your PDA database, using the select-from-where construct of SQL. To receive full credit your queries should be as given below and you should explain in English what the query does. None of your queries should return more than 20 tuples.  
Upload a file containing a the select statements for your queries, a sentence or two for each describing the query, and a the execution of each of the three queries, where the three queries satisfy:

1. One query must involve a two-way or three-way join with a where clause that limits the results to 20 or fewer tuples (but without using the LIMIT keyword).
2. One query must be an aggregate using a group by clause.
3. One query must be an aggregate using a group by clause and a having clause

**(15 pts.)** Write three data modification commands on your PDA database. One should be a simple insert, one a simple update, and one an update that updates several tuples at once. Each of these commands should be legal, given the constraints your created for your database in parts (1) and (2). You might want to try out your commands on small data before trying it on your full database. Upload a script that shows your modification commands running in a convincing fashion, in other words show the relevant part of a relation pre/post the insertion and update commands.

Here is an example of an update and insert command for the Sailors example used in class:

INSERT INTO sailors VALUES (999999,'bob999999',35,5) ;

UPDATE sailors  
SET rating = rating - 1  
WHERE age = 18;

Answer:

//I want find the staff's name who are 20 years old and work in my NO.1 company(id is 1)

mysql> select s.name from companies p, hotels h, staffs s where h.company\_id=p.company\_id and s.hotel\_id= h.hotel\_id and p.company\_id = 1 and s.age=20;

+---------+

| name |

+---------+

| Rhynyx |

| Realmix |

| Yakijo |

+---------+

3 rows in set (0.00 sec)

//I want to my staffs average salary group by hotels

mysql> select AVG(salary), hotel\_id from staffs group by hotel\_id;

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

| AVG(salary) | hotel\_id |

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

| 24798.1522 | 0 |

| 24181.1579 | 1 |

| 31120.1429 | 2 |

| 27187.6471 | 3 |

| 26711.0857 | 4 |

| 28288.7000 | 5 |

| 24366.3261 | 6 |

| 24281.0435 | 7 |

| 24202.2571 | 8 |

| 23226.4318 | 9 |

| 26771.9583 | 10 |

| 22258.6667 | 11 |

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

12 rows in set (0.00 sec)

//I want to my staffs average salary in my NO.3 hotel(id is 3)

mysql> select AVG(salary), hotel\_id from staffs group by hotel\_id having hotel\_id = 3;

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

| AVG(salary) | hotel\_id |

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

| 27187.6471 | 3 |

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

1 row in set (0.00 sec)

//I want add one new staff in my ninthly hotel,

//and the staff id is 500, her name is Jacker, she is 18 years old, she is female and her salary is 40000 dollars.

mysql> INSERT INTO staffs VALUES(500, 'Jacker', 18, 'Female', 40000, 9) ;

Query OK, 1 row affected (0.02 sec)

// I add one new company in my companies table

mysql> INSERT INTO companies VALUES( 5 ,'Happyland');

Query OK, 1 row affected (0.01 sec)

mysql> select \* from companies;

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

| company\_id | name |

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

| 0 | Gabcube |

| 1 | Tekfly |

| 2 | Abata |

| 3 | Leenti |

| 4 | Katz |

| 5 | Happyland |

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

6 rows in set (0.01 sec)

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描述已自动生成

mysql> INSERT INTO companies VALUES( 6 ,'HappylandTwo');

Query OK, 1 row affected (0.02 sec)

mysql> select \* from companies;

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

| company\_id | name |

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

| 0 | Gabcube |

| 1 | Tekfly |

| 2 | Abata |

| 3 | Leenti |

| 4 | Katz |

| 5 | Happyland |

| 6 | HappylandTwo |

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

7 rows in set (0.00 sec)

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//I want to let NO.1 staff increase her salary by one thousand.

mysql> UPDATE staffs

-> SET salary = salary + 1000

-> WHERE staff\_id = 1;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

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描述已自动生成

//I want to increase my staffs' salary and the staffs' age are 18

//when the staffs'age are 18, I let them increase their salary by one hundred.

mysql> UPDATE staffs

-> SET salary = salary + 100

-> WHERE age = 18;

Query OK, 9 rows affected (0.03 sec)

Rows matched: 9 Changed: 9 Warnings: 0

//I want to increase my staffs' salary and the staffs’id less than 10

//when the staffs' id less than 10, I let them increase their salary by one hundred.

mysql> UPDATE staffs SET salary = salary + 100 WHERE staff\_id < 10;

Query OK, 10 rows affected (0.01 sec)

Rows matched: 10 Changed: 10 Warnings: 0

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