

Week 6 Honors Quiz

Question 1

In 2019, a growing hotel chain sent out customer satisfaction surveys to all guests after their stay and recorded the responses in a table named **survey2019**. The survey includes a field for the location of the recent stay, but some customers neglect to include it in their responses, so sometimes the **location** field is **NULL**. (Note that some locations may close, and several new locations were opened in 2019.) The chain also has a table that holds average responses from previous years, for different demographics. Consider this query, which gets information from both tables for comparison.

```
SELECT this.location, AVG(this.room_service_rating) AS avg_2019,  
      AVG(s.room_service_rating) AS avg_previous  
      FROM survey2019 this  
      JOIN survey_summary s ON (this.location <=> s.location)  
      GROUP BY this.location;
```

Which best describes the result of this query?

Ans: Only rows with a match will be used to calculate averages; there will be one row with **NULL** in **this.location**, and it will have values for both **avg_2019** and **avg_previous**

Question 2

Following are two tables, and a query to join them.

uncles

name	age
John	38
Harry	63
Stiel	44

aunts

name	age
Ann	24
Mildred	64
Kayla	54

```
SELECT aunts.name AS aunt, uncles.name AS uncle  
      FROM aunts JOIN uncles  
      ON aunts.age > uncles.age;
```

How many rows will this query return?

Ans:5

Question 3

How many rows will result if you cross join a table that has 10 rows with a table that has 60 rows?

Ans: 600

Question 4

Following are the schema for the **fly.flights** and **fly.planes** tables on the VM.

fly.flights

name	type
year	smallint
month	tinyint
day	tinyint
dep_time	smallint
sched_dep_time	smallint
dep_delay	smallint
arr_time	smallint
sched_arr_time	smallint
arr_delay	smallint
carrier	string
flight	smallint
tailnum	string
origin	string
dest	string
air_time	smallint
distance	smallint

fly.planes

name	type
tailnum	string
year	int
type	string
manufacturer	string
model	string
engines	int
seats	int
engine	string

Which of the following are valid semi-joins? Check all that apply.

Ans: SELECT origin, flight, arr_delay
FROM fly.flights f LEFT SEMI JOIN fly.planes p
ON f.tailnum = p.tailnum AND engines > 1;

SELECT origin, flight, arr_delay
FROM fly.flights f LEFT SEMI JOIN fly.planes p
ON f.tailnum = p.tailnum WHERE arr_delay>60;