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COMP 3421 A5

Q1: Find all info about managers who are 26 or younger and live in CA

mysql> Select * from Manages M, Employee E where M.eid = E.eid and E.age <= 26 and E.residenceState = "CA";

```
+-----+-----+---------------------+-----+----------+------+--------+----------------+------------+
| eid | did | dateStartedManaging | eid | name     | age  | salary | residenceState | startDate  |
+-----+-----+---------------------+-----+----------+------+--------+----------------+------------+
| 545 |   1 | 2021-06-05          | 545 | Sally545 |   26 |  79069 | CA             | 2021-12-17 |
|  85 |  14 | 2021-11-09          |  85 | Sally85  |   21 |  41759 | CA             | 2021-09-14 |
| 411 |  17 | 2021-06-10          | 411 | Sally411 |   26 |  76422 | CA             | 2021-03-26 |
+-----+-----+---------------------+-----+----------+------+--------+----------------+------------+
3 rows in set (0.00 sec)
```

Q2: Find the name and salary of managers who earn less than 35000

mysql> Select E.name, E.salary from Employee E, Manages M where E.eid = M.eid and E.salary < 35000;

```
+----------+--------+
| name     | salary |
+----------+--------+
| Sally204 |  23408 |
| Sally284 |  28465 |
| Sally321 |  29538 |
| Sally439 |  22562 |
| Sally669 |  31113 |
| Sally728 |  27451 |
| Sally939 |  33751 |
+----------+--------+
7 rows in set (0.00 sec)
```

Q3: Find the eid and startDate of managers who started working before Feb 1, 2021

-- i.e., startDate < "2021-02-01"

mysql> Select E.eid, E.startDate from Manages M, Employee E where M.eid = E.eid and E.startDate < "2021-02-01";

```
mysql> Select E.eid, E.startDate from Manages M, Employee E where M.eid = E.eid and E.startDate < "2021-02-01";
+-----+------------+
| eid | startDate  |
+-----+------------+
| 157 | 2021-01-02 |
| 329 | 2021-01-19 |
+-----+------------+
2 rows in set (0.01 sec)
```

Q4: Find the name of the employee who manages the "department40" department

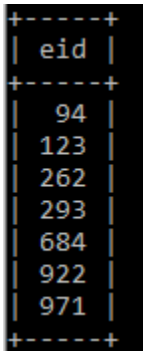
mysql> Select E.name from Employee E, Manages M, Department D where E.eid = M.eid and M.did = D.did and D.name = "department40";

```
+----------+
| name     |
+----------+
| Sally948 |
+----------+
1 row in set (0.00 sec)
```

Q5: Find the eid of employees who work in exactly 3 departments

-- Hint: use aggregates/group by/having

mysql> select W.eid from WorksFor W group by W.eid having count(W.did) = 3;



eid
94
123
262
293
684
922
971

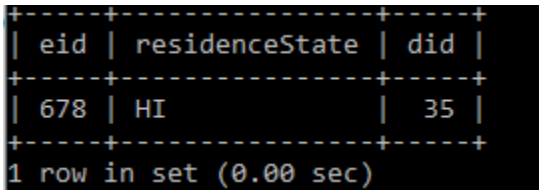
Q6: Find the eid, residenceState, and did for all those 20 year old

-- employees that work in a department located in the same state that they live in.

mysql> Select E.eid, E.residenceState, W.did

-> from Employee E, WorksFor W, Department D

-> where E.eid = W.eid and D.did = W.did and E.age = 20 and E.residenceState = D.stateLocated;



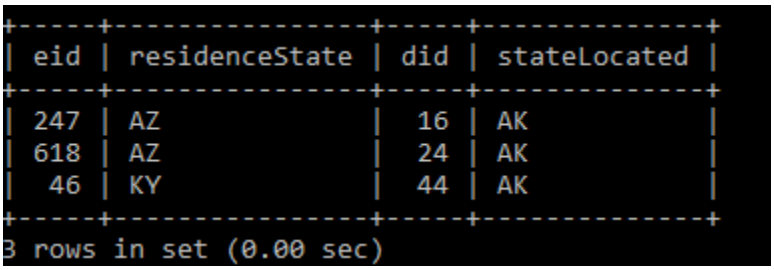
eid	residenceState	did
678	HI	35

1 row in set (0.00 sec)

Q7: Find the eid, residence state, did, and department state

-- for every managers who manages a department located in AK

mysql> Select M.eid, E.residenceState, M.did, D.stateLocated from Employee E, Manages M, department D where E.eid = M.eid and D.did = M.did and D.stateLocated = "AK";



eid	residenceState	did	stateLocated
247	AZ	16	AK
618	AZ	24	AK
46	KY	44	AK

3 rows in set (0.00 sec)

Q8: Find the eid, residence state, did, and deparment state for

-- every employee that works for a department located in CO

mysql> Select E.eid, E.residenceState, D.did, D.stateLocated

-> from Employee E, Department D, WorksFor W

-> where E.eid = W.eid and D.did = W.did and D.stateLocated = "CO";

76	DE	41	CO
121	FL	41	CO
168	AZ	41	CO
254	DE	41	CO
258	ME	41	CO
283	KY	41	CO
341	HI	41	CO
346	DE	41	CO
358	KS	41	CO
367	KS	41	CO
486	AZ	41	CO
522	IN	41	CO
529	IN	41	CO
569	FL	41	CO
673	IA	41	CO
744	CO	41	CO
815	ID	41	CO
909	CO	41	CO
930	LA	41	CO
956	IA	41	CO
968	KY	41	CO
25	HI	43	CO
67	AZ	43	CO
98	CO	43	CO
144	AL	43	CO
332	AK	43	CO
335	LA	43	CO
438	DE	43	CO
490	DE	43	CO
510	FL	43	CO
514	IN	43	CO
622	CT	43	CO
640	CO	43	CO
660	IA	43	CO
695	AL	43	CO
732	DE	43	CO
734	CO	43	CO
787	AZ	43	CO
841	KS	43	CO
910	ME	43	CO
978	AZ	43	CO
995	AZ	43	CO

42 rows in set (0.00 sec)

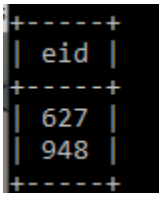
Q9: find the eid of employees who are managing two or more departments

mysql> Select M.eid

-> from Manages M

-> group by M.eid

-> having count(M.did) >= 2;

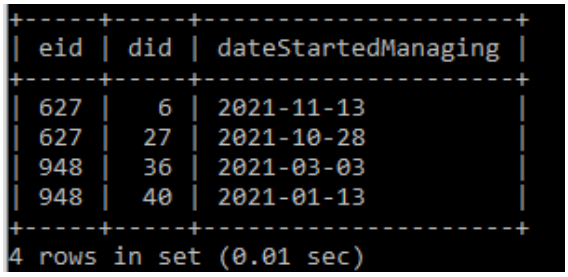


eid
627
948

Q10: find eid, did, and manging starting date for all employees found in the previous problem

-- Hint: use "in" and a nested query

```
mysql> Select M.eid, M.did, M.dateStartedManaging
    -> from Manages M
    -> where M.eid in (
    -> select M2.eid from Manages M2 group by M2.eid having count(M2.did) >= 2);
```

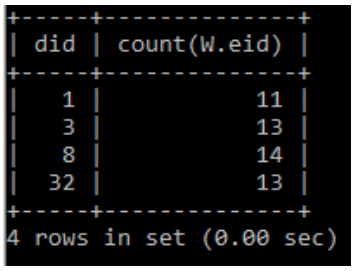


eid	did	dateStartedManaging
627	6	2021-11-13
627	27	2021-10-28
948	36	2021-03-03
948	40	2021-01-13

4 rows in set (0.01 sec)

Q11: find the did and number of empolyees for every department with 14 or fewer employees

```
mysql> Select W.did, count(W.eid)
    -> from WorksFor W
    -> group by W.did
    -> having count(W.eid) <= 14;
```



did	count(W.eid)
1	11
3	13
8	14
32	13

4 rows in set (0.00 sec)

Q12: Find the average employee salary for each department whose did is < 6.

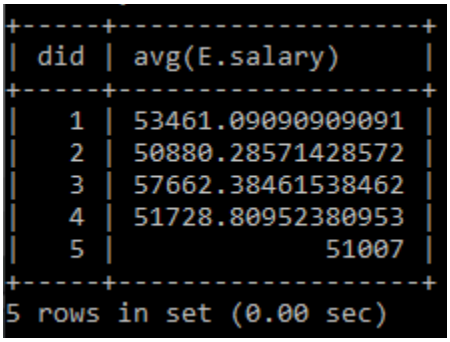
-- In other words, for each of those departments find the average salary of employees

-- who work for that department

```
mysql> Select W.did, avg(E.salary)
    -> from WorksFor W, Employee E
```

-> where W.eid = E.eid and W.did < 6

-> group by W.did;



```
+-----+-------------------+
| did | avg(E.salary)     |
+-----+-------------------+
|   1 | 53461.09090909091 |
|   2 | 50880.28571428572 |
|   3 | 57662.38461538462 |
|   4 | 51728.80952380953 |
|   5 |             51007 |
+-----+-------------------+
5 rows in set (0.00 sec)
```