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Databases
PDA Assignment 4

Part 1.)

Query 1:
Display the properties that have a lease with a tenant under 30 years old whose account is in bad standing.

```
select L.Pid
from Leases L, Tenants T
where L.Lid = T.Lid
and T.age <= 31
and T.acctStand = 0 ;
```

```
mysql> select L.Pid
    -> from Leases L, Tenants T
    -> where L.Lid = T.Lid
    -> and T.age <= 31
    -> and T.acctStand = 0 ;
+------+
| Pid  |
+------+
|  455 |
| 1767 |
| 1712 |
| 1862 |
| 1837 |
+------+
5 rows in set (0.01 sec)
```

Query 2:
Display the ID and minimum age of the tenants whose accounts are not in good standing, and who are under 20 years old, grouped by the age of the tenant.

```
select T.Tid, MIN(T.age)
from Tenants T
where acctStand = 0
group by age
having age <= 20;
```

```
mysql> select T.Tid, MIN(T.age)
    -> from Tenants T
    -> where acctStand = 0
    -> group by age
    -> having age <= 20;
+------+------------+
| Tid  | MIN(T.age) |
+------+------------+
```

```
| 3468 |         19 |
| 5557 |         15 |
| 6043 |          9 |
+------+------------+
3 rows in set (0.00 sec)
```

Query 3:
Display the number of properties (by ID) that are occupied (not vacant) by tenants over 60, and that need sprinkler repairs, grouped by age of tenant.

```
select P.Pid, count(P.Pid)
from Properties P, leases L, Tenants T
where P.Pid = L.Pid and L.Lid = T.Lid
and vacancy = 0
and P.neededRepair = 'sprinklers'
group by T.age
having T.age >= 61;
```

```
mysql> select P.Pid, count(P.Pid)
    -> from Properties P, leases L, Tenants T
    -> where P.Pid = L.Pid and L.Lid = T.Lid
    -> and vacancy = 0
    -> and P.neededRepair = 'sprinklers'
    -> group by T.age
    -> having T.age >= 61;
+-----+--------------+
| Pid | count(P.Pid) |
+-----+--------------+
| 569 |            1 |
| 569 |            1 |
| 569 |            1 |
| 569 |            1 |
| 569 |            1 |
| 902 |            1 |
| 569 |            1 |
| 569 |            1 |
| 817 |            1 |
| 817 |            1 |
| 569 |            1 |
| 569 |            1 |
| 817 |            1 |
| 569 |            1 |
| 902 |            1 |
| 569 |            1 |
| 569 |            1 |
| 569 |            1 |
| 569 |            1 |
```

```
| 284 |           1 |
| 569 |           1 |
| 569 |           1 |
| 569 |           1 |
+-----+-------------+
23 rows in set (0.02 sec)
```

Part 2.)

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.

Modification 1:
Insert a new Owner's information.

```
mysql>  select * from owners order by oid desc limit 10;
+------+----------+----------+
| Oid  | name     | phoneNum |
+------+----------+----------+
| 2000 | Kate2000 |        2 |
| 1999 | Kate1999 |        5 |
| 1998 | Kate1998 |        8 |
| 1997 | Kate1997 |        8 |
| 1996 | Kate1996 |        7 |
| 1995 | Kate1995 |        5 |
| 1994 | Kate1994 |        6 |
| 1993 | Kate1993 |        2 |
| 1992 | Kate1992 |        7 |
| 1991 | Kate1991 |        8 |
+------+----------+----------+
10 rows in set (0.00 sec)

mysql> insert into Owners values (2001, 'Kate2001', 9-5-2 );
Query OK, 1 row affected (0.00 sec)

mysql>  select * from owners order by oid desc limit 10;
+------+----------+----------+
| Oid  | name     | phoneNum |
+------+----------+----------+
| 2001 | Kate2001 |        2 |
| 2000 | Kate2000 |        2 |
| 1999 | Kate1999 |        5 |
| 1998 | Kate1998 |        8 |
| 1997 | Kate1997 |        8 |
| 1996 | Kate1996 |        7 |
| 1995 | Kate1995 |        5 |
| 1994 | Kate1994 |        6 |
| 1993 | Kate1993 |        2 |
| 1992 | Kate1992 |        7 |
```

```
+------+----------+----------+
10 rows in set (0.00 sec)
```

Modification 2:
Update the Account Standing status on the tenant with tenant ID number 1550.

```
mysql> select * from tenants where Tid = 1550;
+------+------+------+------+--------+----------+-----------+
| Tid  | Lid  | name | age  | gender | phoneNum | acctStand |
+------+------+------+------+--------+----------+-----------+
| 1550 | 1195 | 1042 | 7500 |      0 |       32 |         1 |
+------+------+------+------+--------+----------+-----------+
1 row in set (0.00 sec)

mysql> UPDATE tenants SET acctStand = 0 WHERE Tid = 1550;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tenants where Tid = 1550;
+------+------+------+------+--------+----------+-----------+
| Tid  | Lid  | name | age  | gender | phoneNum | acctStand |
+------+------+------+------+--------+----------+-----------+
| 1550 | 1195 | 1042 | 7500 |      0 |       32 |         0 |
+------+------+------+------+--------+----------+-----------+
1 row in set (0.00 sec)
```

Modification 3:
Update the Account Standing status on all tenants 25 years old and younger.

```
mysql>  select * from tenants order by age asc limit 20;
+------+------+------+------+--------+----------+-----------+
| Tid  | Lid  | name | age  | gender | phoneNum | acctStand |
+------+------+------+------+--------+----------+-----------+
| 9542 | 1928 | 549  |    5 |      0 |       30 |         1 |
| 3786 | 1582 | 1078 |    6 |      0 |       36 |         1 |
|  527 | 1514 | 848  |    6 |      0 |       62 |         1 |
| 6043 | 1791 | 464  |    9 |      0 |       13 |         0 |
|  147 |  909 | 416  |   10 |      0 |       94 |         1 |
|  520 | 1197 | 690  |   11 |      0 |        7 |         1 |
| 9991 |  718 | 672  |   13 |      0 |       48 |         1 |
| 5557 |  626 | 115  |   15 |      0 |       45 |         0 |
| 5048 | 1097 | 424  |   17 |      0 |       21 |         1 |
| 7364 | 1518 | 876  |   18 |      0 |       84 |         1 |
| 9424 | 1758 | 713  |   18 |      0 |       95 |         1 |
| 2126 |  267 | 255  |   19 |      0 |        3 |         1 |
| 3468 | 1226 | 462  |   19 |      0 |       40 |         0 |
| 2630 | 1003 | 348  |   21 |      0 |       79 |         0 |
| 5726 | 1206 | 971  |   22 |      0 |       88 |         1 |
| 2874 |  105 | 575  |   25 |      0 |        8 |         1 |
| 3903 |  276 | 733  |   26 |      0 |       31 |         0 |
```

```
| 5332 |  528 | 330  |   27 |      0 |       74 |         0 |
| 1257 | 1955 | 174  |   27 |      0 |       48 |         0 |
| 1228 |  508 | 690  |   34 |      0 |       37 |         1 |
+------+------+------+------+--------+----------+-----------+
20 rows in set (0.00 sec)

mysql> update Tenants
    -> set acctStand = acctStand - 1
    -> where age <= 25 and acctStand = 1;
Query OK, 12 rows affected (0.01 sec)
Rows matched: 12  Changed: 12  Warnings: 0

mysql> select * from tenants order by age asc limit 20;
+------+------+------+------+--------+----------+-----------+
| Tid  | Lid  | name | age  | gender | phoneNum | acctStand |
+------+------+------+------+--------+----------+-----------+
| 9542 | 1928 | 549  |    5 |      0 |       30 |         0 |
| 3786 | 1582 | 1078 |    6 |      0 |       36 |         0 |
|  527 | 1514 | 848  |    6 |      0 |       62 |         0 |
| 6043 | 1791 | 464  |    9 |      0 |       13 |         0 |
|  147 |  909 | 416  |   10 |      0 |       94 |         0 |
|  520 | 1197 | 690  |   11 |      0 |        7 |         0 |
| 9991 |  718 | 672  |   13 |      0 |       48 |         0 |
| 5557 |  626 | 115  |   15 |      0 |       45 |         0 |
| 5048 | 1097 | 424  |   17 |      0 |       21 |         0 |
| 7364 | 1518 | 876  |   18 |      0 |       84 |         0 |
| 9424 | 1758 | 713  |   18 |      0 |       95 |         0 |
| 2126 |  267 | 255  |   19 |      0 |        3 |         0 |
| 3468 | 1226 | 462  |   19 |      0 |       40 |         0 |
| 2630 | 1003 | 348  |   21 |      0 |       79 |         0 |
| 5726 | 1206 | 971  |   22 |      0 |       88 |         0 |
| 2874 |  105 | 575  |   25 |      0 |        8 |         0 |
| 3903 |  276 | 733  |   26 |      0 |       31 |         0 |
| 5332 |  528 | 330  |   27 |      0 |       74 |         0 |
| 1257 | 1955 | 174  |   27 |      0 |       48 |         0 |
| 1228 |  508 | 690  |   34 |      0 |       37 |         1 |
+------+------+------+------+--------+----------+-----------+
20 rows in set (0.00 sec)
```