Lab 6 Tasks: Solutions

Task 1: Advanced SQL SELECT Statements

There are proposed solutions on the SQL selection queries.

SQL 1:

```
SELECT Owner.name, Owner.ownerid, COUNT(Dog.dogid)
FROM  Owner, Dog
WHERE Owner.ownerid = Dog.ownerid
GROUP BY Owner.ownerid
HAVING COUNT(Dog.dogid) >= 8
ORDER BY Owner.name
```

SQL 2:

```
SELECT Kennel.kennelname, COUNT(Dog.dogid)
FROM Kennel, Dog
WHERE Dog.kennelname = Kennel.kennelname
GROUP BY Kennel.kennelname
HAVING COUNT(Dog.dogid) > 3
ORDER BY COUNT(Dog.dogid) DESC
```

SQL 3:

```
SELECT K1.kennelname, COUNT(D1.dogid)
FROM Kennel K1, Dog D1
WHERE K1.kennelname = D1.kennelname
GROUP BY K1.kennelname
HAVING COUNT(D1.dogid) >= ALL
(SELECT COUNT(Dog.dogid)
    FROM Kennel, Dog
    WHERE Dog.kennelname = Kennel.kennelname
    GROUP BY Kennel.kennelname)
```

SQL 4:

```
SELECT a.dogid, COUNT(a.dogid)
FROM Attendance a
WHERE 1 = ALL (
      SELECT a1.place
      FROM Attendance a1
      WHERE a1.dogid = a.dogid)
GROUP BY a.dogid
HAVING COUNT(a.dogid) > 1
```

SQL 5:

Part 1: We show the average place (rank) for each owner (whose dog has at least attended a show). We use the ::numeric(10,2) over the AVG operator to get a real number (avoid integer division).

```
SELECT Owner.name AS OwnerName, AVG(Attendance.place)::numeric(10,2) AS
Average
FROM Owner, Attendance, Dog
WHERE Owner.ownerid = Dog.ownerid
AND   Dog.dogid = Attendance.dogid
GROUP BY Owner.ownerid
```

Part 2: Show the average place (rank) *overall*

```
SELECT X.OwnerName, X.Average FROM
(SELECT 'Overall' AS OwnerName, AVG(Attendance.place)::numeric(10,2) AS
Average  FROM Attendance) AS X
```

Part 1 UNION Part 2:

```
SELECT Owner.name AS OwnerName, AVG(Attendance.place)::numeric(10,2) AS
Average
FROM Owner, Attendance, Dog
WHERE Owner.ownerid = Dog.ownerid
AND   Dog.dogid = Attendance.dogid
GROUP BY Owner.ownerid
UNION
SELECT X.OwnerName, X.Average FROM
(SELECT 'Overall' AS OwnerName, AVG(Attendance.place)::numeric(10,2) AS
Average FROM Attendance) AS X
```