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| **CIS355 HOMEWORK 11: Last Queries** |

* You will have to understand the data (both meta-data & raw/end user data) to write good queries, so be curious, experiment, & use the “Object Explorer” as needed.
* All columns should have meaningful names.
* State any assumptions you make, where a question is unclear.
* Note that some questions ask for your code (i.e., “Show the SELECT statement…”) while others just ask for an answer to a question (e.g., “why is it ok to do x”).

**Part 1: GI\_Animal Database – Queries on Unary Relationships.**Use the following Database Diagram for this section.

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USE GI\_Animal

/\* This table is from a database that tracks livestock animals and their genealogy.

Note that there are two unary relationships on the Animal table, one for fathers and

one for mothers, and two corresponding FKs. Get familiar with the data by executing

the following query: \*/

SELECT \* FROM Animal

/\* 1. Show the SELECT statement that answers this request:

For every mother animal, list the mother's name and the number of kids she has. \*/

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| **PART 2. AdventureWorks2012 - Employees & Salespeople.**  Consider the portion of the AdventureWorks2012 database shown below. Note that some tables are from the Person schema while others are from the HumanResources schema. |

USE AdventureWorks2012

/\* 2. Consider the following query: \*/

SELECT Person.Person.FirstName + ' ' + Person.Person.LastName AS "Employee",

HumanResources.Employee.JobTitle,

YEAR(GETDATE())-YEAR(HireDate) AS "Years with Company"

FROM Person.Person INNER JOIN HumanResources.Employee

ON Person.Person.BusinessEntityID = HumanResources.Employee.BusinessEntityID

WHERE CurrentFlag = 1 AND SalariedFlag = 0

ORDER BY "Years with Company" DESC

/\* a. How many columns does the query return?

b. Why is there no GROUP BY clause, considering that there is a function in the SELECT clause?

c. Will the query result include any people who are not employees? How do you know?

d. Will the query result include all employees? Why or why not?

e. Why is it ok to use the alias "Years with Company" in the ORDER BY clause?

f. Show how you would change the query if we only wanted to see current salaried employees

who have been with the company less than 15 years. \*/

/\* 3. Show the SELECT statement for this request:

What is the total sick leave across all current employees? \*/

/\* 4. Show the SELECT statement for this request:

Which employees have sick leave hours above the average sick leave for all employees?

Show their national ID numbers, job titles, and sick leave hours. Only current

employees should be included in the query. (Hint: Use a subquery to return the

average sick leave hours for all employees, similar to the last subquery example from

the in-class exercises from 4/12, posted on Canvas under Week 12.)\*/

/\* 5. How would you change the previous query if you want the result to

show employee names too?\*/

/\* 6. Show the SELECT statement for this request:

What are the total sick leave hours, by job title? Only current employees should

be included in the total sick leave calculation.\*/

/\* 7. Show the SELECT statement for this request:

Show the names of sales territories that have no salespeople,

if there are any. (Hint: There should be one.) \*/