SQL Fundamentals – TYPE I SUBQUERIES

Often times there is more than one way to write an SQL statement to answer a question. However, for these assignment be sure to use the technique taught in the lesson if you can think of more than one way to write the SQL. The point of the lessons and assignments is to learn and practice each technique.

1. AW: List employees who work the night shift in as a production supervisor. List the employee's ID, first name, last name, job title. Subquery: Get list of IDs for employees who work the night shift. Hint: Use an inexact match for the job title criterion.
2. AW: List employees who have worked in the Marketing department since before 2000. List the employee's ID, first name, last name, and job title. Subquery: Get a list of IDs for employees who work the Research and Development department since before 2000 (start date).
3. AW: List employees who have worked in the Marketing department and started after 1999. List the employee's ID, first name, last name, and job title. Subquery: Get a list of IDs for employees who work the Research and Development department after 1999 (start date).
4. AW: Show the average number of vacation hours managers have. Include anyone whose job title has 'manager' in it.
5. AW: Show which managers have more vacation hours than the average for managers. List the employe's ID, last name, job title, and vacation hours. HINT: Think about where the subquery goes--WHERE clause or HAVING clause.

What to do:

1. In one file write all the SQL commands.
2. Before each command add the problem statement as a comment line.
3. The file must be a simple text file with a TXT or SQL file extension.
4. Test your commands and make sure they are error-free before submitting the solution file.

Solutions:

/\* AW: List employees who work the night shift in as a production supervisor. List the employee's ID,

first name, last name, job title. Subquery: Get list of IDs for employees who work the night shift.

Hint: Use an inexact match for the job title criterion. \*/

/\* Subquery \*/

select businessEntityID

from AdventureWorks2008.HumanResources.EmployeeDepartmentHistory

 join AdventureWorks2008.HumanResources.Shift

 on EmployeeDepartmentHistory.shiftID =

 Shift.ShiftID

where Shift.Name = 'Night';

/\* Outer query lists students \*/

select person.businessEntityID, FirstName, LastName, JobTitle

from AdventureWorks2008.HumanResources.Employee

 join AdventureWorks2008.Person.Person

 on Employee.businessEntityID = person.businessEntityID

and jobTitle like '%Production Supervisor%'

and Person.BusinessEntityID IN

 (select businessEntityID

 from AdventureWorks2008.HumanResources.EmployeeDepartmentHistory

 join AdventureWorks2008.HumanResources.Shift

 on EmployeeDepartmentHistory.shiftID =

 Shift.ShiftID

 where Shift.Name = 'Night');

/\* AW: List employees who have worked in the Marketing department since before 2000. List the employee's ID, first name, last name, and job title. Subquery: Get a list of IDs for employees who work the Research and Development department since before 2000 (start date). \*/

/\* Subquery \*/

select businessEntityID

from AdventureWorks2008.HumanResources.EmployeeDepartmentHistory

 join AdventureWorks2008.HumanResources.Department

 on EmployeeDepartmentHistory.departmentID =

 Department.DepartmentID

and Department.name = 'Marketing'

and startDate < '2000-01-01';

/\* Outer query \*/

select person.businessEntityID, FirstName, LastName, JobTitle

from AdventureWorks2008.HumanResources.Employee

 join AdventureWorks2008.Person.Person

 on Employee.businessEntityID = person.businessEntityID

and Person.BusinessEntityID IN

 (select businessEntityID

 from AdventureWorks2008.HumanResources.EmployeeDepartmentHistory

 join AdventureWorks2008.HumanResources.Department

 on EmployeeDepartmentHistory.departmentID =

 Department.DepartmentID

 and Department.name = 'Marketing'

 and startDate < '2000-01-01'

 );

/\* AW: List employees who have worked in the Marketing department and started after 1999. List the employee's ID, first name, last name, and job title. Subquery: Get a list of IDs for employees who work the Research and Development department after 1999 (start date). \*/

select person.businessEntityID, FirstName, LastName, JobTitle

from AdventureWorks2008.HumanResources.Employee

 join AdventureWorks2008.Person.Person

 on Employee.businessEntityID = person.businessEntityID

and Person.BusinessEntityID IN

 (select businessEntityID

 from AdventureWorks2008.HumanResources.EmployeeDepartmentHistory

 join AdventureWorks2008.HumanResources.Department

 on EmployeeDepartmentHistory.departmentID =

 Department.DepartmentID

 and Department.name = 'Marketing'

 and startDate >= '2000-01-01'

 );

/\* AW: Show the average number of vacation hours managers have. Include anyone whose job title has 'manager' in it. \*/

select avg(vacationHours)

from AdventureWorks2008.HumanResources.Employee

where jobTitle like '%manager%';

/\* AW: Show which managers have more vacation hours than the average for managers. List the employe's ID, last name, job title, and vacation hours. HINT: Think about where the subquery goes--WHERE clause or HAVING clause. \*/

select person.businessEntityID, LastName, JobTitle, VacationHours

from AdventureWorks2008.HumanResources.Employee

 join AdventureWorks2008.Person.Person

 on Employee.businessEntityID = person.businessEntityID

where jobTitle like '%manager%'

and vacationhours >

 ( select avg(vacationHours)

 from AdventureWorks2008.HumanResources.Employee

 where jobTitle like '%manager%');