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Due July 24, 2017

SQL

Assignment #6 Code

1. select FNAME, LNAME, BUILDING

from Employees

where SALARY in (select max(SALARY)

from Employees

group by BUILDING)

order by BUILDING

1. select FNAME, LNAME, DEPT

from Employees

where SALARY > (select avg(SALARY)

from Employees)

1. select FNAME, LNAME, RETIREACCTNUMBER

from Employees

where RETIREAMOUNT = (select max(RETIREAMOUNT)

from Employees)

1. select FNAME, LNAME, DEPT

from Employees

where MANAGER is not null

1. select FNAME, LNAME, EID

from Employees

where RETIREACCT = 'stocks'

1. select FNAME, LNAME, SALARY

from Employees

where SALARY = (select min(SALARY)

from Employees)

or SALARY = (select max(SALARY)

from Employees)

order by SALARY

1. select FNAME, LNAME, DEPT

from Employees

where SALARY in (select max(SALARY)

from Employees

group by DEPT)

order by DEPT

Assignment #6 Short Answer

1. In a correlated subquery, the outer SQL statement provides the values for the inner subquery to use in its evaluation. Then these results are passed back to the outer query. A correlated subquery checks the data in the table row by row. The inner subquery cannot be evaluated independently. It references the outer query and is executed once for each qualified row in the outer query.
2. EXISTS tests for the existence or nonexistence of data that meets the criteria of the subquery. When writing a query testing for the existence of data, an asterisk is almost always used because there is no point in using column names if you are just trying to see if the data exists or not. The EXISTS statement is not preceded by any constant, column name or expression. This is almost always a correlated subquery.
3. There is no ‘better’ over joins or subqueries. They do have their advantages. Subqueries are best for when you are trying to compare aggregates to other values (especially when using functions like MAX, MIN, and AVG in the code above). Joins are hands down the best for displaying results from multiple tables because you are unable to do so with just a subquery.
4. ANY and ALL are used to compare basically minimum and maximum values. Let me explain: if you create a subquery that asks if one value is greater than ANY value that is specified by the subquery, that means that the one value is only true if it is greater than the maximum value of whatever was specified. If it is true that one value is greater than ANY given value with a given criteria, then it will be greater than even the maximum value. Same goes for ANY, it is just vice versa. If one value is greater than ANY value with a given criteria, it has to be greater than the minimum value. =ANY is the equivalent of IN.
5. Subqueries can be used in Insert, Delete, and/or Update statements. You can edit a table and restrict what you edit. For example, you can write an update query, and in the subquery, you can write that you only want to update the rows that meet your specific criteria. For example, you only update rows that include the name of a certain company/group, so it does not update for every company/group in your database.