SQL language

Use the ScottDB database

1. List the name, hire date, job columns of employees of department 20, by descending order of names!

2. Display the annual income of those employees whose job position is 'clerk' or 'salesman'. Sort the result in ascending order by departments!

3. List the name, the annual salary, the hire date, the month hired so far of those employees who was entered for the company before first of July in 1981, by descending order of the number of month of work so far.

4. List the name of the bosses with the number of their employees, by descending order of the number employees.

5. List those average incomes of each job which is greater than 2000 $. Sort the result by jobs.

6. Write a query to determine the number of customers. (Use Customers table of Northwind database).

7. Write a query that retrieves the total number of products ordered. (Use the Quantity column of the OrderDetails table and the SUM function).

8. Write a query to determine the price of the most expensive product ordered. Use the UnitPrice column of the OrderDetails table.

9. Write a query to determine the average freight amount in the OrderHeader table.

10. Write a query using the Product table that displays the minimum, maximum, and average UnitPrice.

JOIN operations

Syntax of joins
INNER JOIN operation
       SELECT * FROM *table1*
       INNER JOIN *table2* ON *table1.attribute1 = table2.attribute2*
Outer joins
       SELECT * FROM *tabe1*
       LEFT | RIGHT OUTER JOIN *table2* ON *table1.attribute1 = table2.attribute2;*
Full join
       SELECT * FROM *table1*
       FULL JOIN *table2* ON *table1.attribute1=table2.attribute2*;
Cross join
       SELECT * FROM *table1*
       CROSS JOIN *table2*;

Exercises: Use Northwind database
1.   Create a query to list the productID, product name and category name values of products.

2.   Create a query to list the code and name (CustomerID, CompanyName) of those customers who has orders!

3.   List customers (code and name) who have not any orders!

4.   List the number of orders of customers!

5.   Display the CustomerId, the number of orders and the total value ($) of orders for each customers, who are in USA.

6.   Display the employeeId, the fullname, the title and his/her boss name of each employees!

7.   List the productid, the product name, the unitprice, the supplierid and the suppliers' name of those products which unitprice is greater than 50$.

8.   List the name of employees and the name of territories which managed by that employee.

9.   List territories of Southern region! (Region and Territories tables!)

10.   Display the territory name and the fullname of those employees, who manages the territories of Southern region!

11.   Which territories are not managed by any employees? Which region contains these territories?