

Florida International University  
School of Computer Science

COP- 4710 Database Management

Assignment 4

Value: 100 points (7.5% weight of the course)

Due: July 26, 2020, 11:59 PM

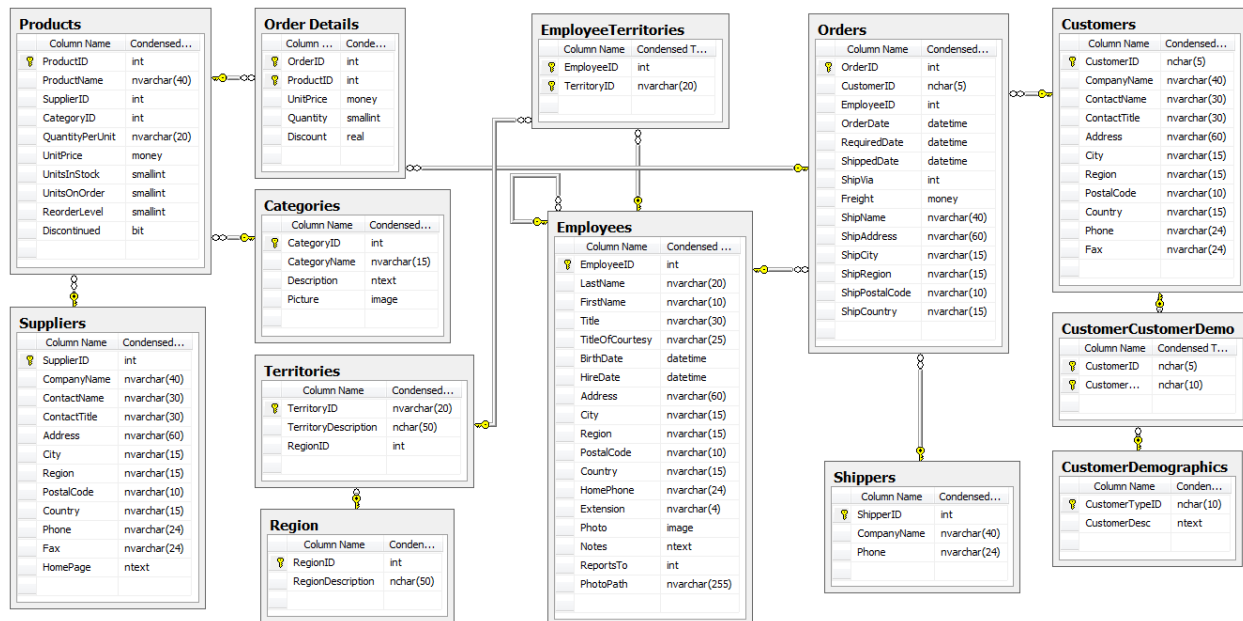
**PROBLEM 1: Write SQL queries on the Northwind database.**

**[100 points]**

In this problem, you are required to write SQL statements using the Northwind database. In order to run your queries using data, you need to run the pg\_northwind\_db.sql provided with this assignment using psql or in pgAdmin in PostgreSQL. Write the queries and show the results.

The Northwind database is a sample database created by Microsoft originally for SQL Server and Microsoft Access. The database contains the sales data for Northwind Traders, a fictitious specialty foods export-import company.

The diagram below shows the table structure of the Northwind database.



**Queries:**

1. Write a query to retrieve the Product name and quantity/unit.
2. Write a query to get the ten most expensive Products (name and unit price).
3. Write a query to get Product list (id, name, unit price) where products cost between \$15 and \$25
4. For each order, calculate a subtotal for each Order (identified by OrderID). This is a simple query using GROUP BY to aggregate data for each order. The formula to calculate the subtotal for each order is  $\text{UnitPrice} * \text{Quantity} * (1 - \text{Discount})$ .
5. For each employee, get their sales amount, broken down by country name. We need to retrieve the country, last name, first name, shipped date, order id and the subtotal as sales\_amount (using this formula:  $\text{Unit\_Price} * \text{Quantity} * (1 - \text{Discount})$ ).
6. Retrieve products by category including category name, product name, quantity per unit, units in stock and the discontinued column (discontinued = 1, no discontinued = 0) for the products that are not discontinued.
7. List the company name, contact name from Customers and Suppliers by City. In the result of the query you need to specify who are the customers and who are the suppliers.
8. List the product name and unit price for products above the average price
9. Write a simple query to get detailed information for each sale so that invoice can be issued. Include this information in the result of your query: ShipName, ShipAddress, ShipCity, ShipRegion, ShipPostalCode, ShipCountry, CustomerID, CompanyName, Address, City, Region, PostalCode, Country, Salesperson name and last name, OrderID, OrderDate, RequiredDate, ProductID, ProductName, UnitPrice, Quantity,  $\text{UnitPrice} * \text{Quantity} * (1 - \text{Discount})$  as ExtendedPrice, and Freight.
10. Create a report showing the title of courtesy and the first and last name of all employees whose title of courtesy is not "Ms." or "Mrs."

Submit a document that contains each query and a screenshot of the result of the queries. Also send the sql files (**one query per file** (name each file Assig4\_P1\_Q<query\_number>.sql)– zip them all) using the Canvas system.