Solutions for the Extra Problems in Module 5

The extra problems use the Order Entry Database as described in the Order Entry Database Background document. The course website also contains CREATE TABLE and INSERT statements for Oracle and PostgreSQL.

1. List the order number, order date, customer number, customer name (first and last), employee number, and employee name (first and last) of January 2021 orders placed by Colorado customers.

2. List the customer number, name (first and last), order number, order date, employee number, employee name (first and last), product number, product name, and order cost (`OrdLine.Qty * ProdPrice`) for products ordered on January 23, 2021, in which the order cost exceeds $150.

3. List the order number and total amount for orders placed on January 23, 2021. The total amount of an order is the sum of the quantity times the product price of each product on the order.

4. List the order number, order date, customer name (first and last), and total amount for orders placed on January 23, 2021. The total amount of an order is the sum of the quantity times the product price of each product on the order.

5. List the order number, order date, customer name (first and last), employee name (first and last), count of items in products in an order, and total amount for orders placed on January 23, 2021. The total amount of an order is the sum of the quantity times the product price of each product on the order. The result should only contain orders with more than two different products ordered.

6. Insert yourself as a new row in the *Customer* table.

7. Insert an imaginary friend as a new row in the *Employee* table.

8. Increase the price by 10 percent of products containing the words Ink Jet.

9. Delete the new row added to the *Customer* table.

Solutions

All statements execute in both Oracle and PostgreSQL except where noted.

1.
```
SELECT OrdNo, OrdDate, Customer.CustNo, CustFirstName, CustLastName,
        Employee.EmpNo, EmpFirstName, EmpLastName
  FROM OrderTbl, Customer, Employee
  WHERE CustState = 'CO' AND OrdDate BETWEEN '1-Jan-2021' AND '31-Jan-2021'
      AND OrderTbl.CustNo = Customer.CustNo
      AND OrderTbl.EmpNo = Employee.EmpNo;
```

```
SELECT OrdNo, OrdDate, Customer.CustNo, CustFirstName, CustLastName,
        Employee.EmpNo, EmpFirstName, EmpLastName
  FROM OrderTbl INNER JOIN Customer ON OrderTbl.CustNo = Customer.CustNo
        INNER JOIN Employee ON OrderTbl.EmpNo = Employee.EmpNo
  WHERE CustState = 'CO' AND OrdDate BETWEEN '1-Jan-2021' AND '31-Jan-2021';
```

PostgreSQL solutions with alternative date format

```
SELECT OrdNo, OrdDate, Customer.CustNo, CustFirstName, CustLastName,
        Employee.EmpNo, EmpFirstName, EmpLastName
  FROM OrderTbl, Customer, Employee
  WHERE CustState = 'CO' AND OrdDate BETWEEN '2021-01-01' AND '2021-01-31'
      AND OrderTbl.CustNo = Customer.CustNo
      AND OrderTbl.EmpNo = Employee.EmpNo;
```

```
SELECT OrdNo, OrdDate, Customer.CustNo, CustFirstName, CustLastName,
        Employee.EmpNo, EmpFirstName, EmpLastName
  FROM OrderTbl INNER JOIN Customer ON OrderTbl.CustNo = Customer.CustNo
        INNER JOIN Employee ON OrderTbl.EmpNo = Employee.EmpNo
  WHERE CustState = 'CO' AND OrdDate BETWEEN '2021-01-01' AND '2021-01-31';
```

2.
```
SELECT Customer.CustNo, CustFirstName, CustLastName, OrderTbl.OrdNo,
        OrdDate, Employee.EmpNo, EmpFirstName, EmpLastName,
        Product.ProdNo, ProdName, ProdPrice*Qty AS OrderCost
```

```
    FROM OrderTbl, OrdLine, Product, Customer, Employee
    WHERE OrdDate = '23-Jan-2021' AND ProdPrice*Qty > 150
        AND OrderTbl.OrdNo = OrdLine.OrdNo
        AND OrdLine.ProdNo = Product.ProdNo
        AND OrderTbl.CustNo = Customer.CustNo
        AND Employee.EmpNo = OrderTbl.EmpNo;


SELECT Customer.CustNo, CustFirstName, CustLastName, OrderTbl.OrdNo,
        OrdDate, Employee.EmpNo, EmpFirstName, EmpLastName,
        Product.ProdNo, ProdName, ProdPrice*Qty AS OrderCost
    FROM OrderTbl INNER JOIN Customer ON OrderTbl.CustNo = Customer.CustNo
        INNER JOIN Employee ON OrderTbl.EmpNo = Employee.EmpNo
        INNER JOIN OrdLine ON OrderTbl.OrdNo = OrdLine.OrdNo
        INNER JOIN Product ON OrdLine.ProdNo = Product.ProdNo
    WHERE OrdDate = '23-Jan-2021' AND ProdPrice*Qty > 150;
```

PostgreSQL solutions with alternative date format

```
SELECT Customer.CustNo, CustFirstName, CustLastName, OrderTbl.OrdNo,
        OrdDate, Employee.EmpNo, EmpFirstName, EmpLastName,
        Product.ProdNo, ProdName, ProdPrice*Qty AS OrderCost
    FROM OrderTbl, OrdLine, Product, Customer, Employee
    WHERE OrdDate = '2021-01-23' AND ProdPrice*Qty > 150
        AND OrderTbl.OrdNo = OrdLine.OrdNo
        AND OrdLine.ProdNo = Product.ProdNo
        AND OrderTbl.CustNo = Customer.CustNo
        AND Employee.EmpNo = OrderTbl.EmpNo;


SELECT Customer.CustNo, CustFirstName, CustLastName, OrderTbl.OrdNo,
        OrdDate, Employee.EmpNo, EmpFirstName, EmpLastName,
        Product.ProdNo, ProdName, ProdPrice*Qty AS OrderCost
    FROM OrderTbl INNER JOIN Customer ON OrderTbl.CustNo = Customer.CustNo
        INNER JOIN Employee ON OrderTbl.EmpNo = Employee.EmpNo
        INNER JOIN OrdLine ON OrderTbl.OrdNo = OrdLine.OrdNo
        INNER JOIN Product ON OrdLine.ProdNo = Product.ProdNo
    WHERE OrdDate = '2021-01-23' AND ProdPrice*Qty > 150;


3.
SELECT OrderTbl.OrdNo, SUM(Qty*ProdPrice) AS TotOrdAmt
    FROM OrderTbl, OrdLine, Product
    WHERE OrdDate = '23-Jan-2021'
        AND OrderTbl.OrdNo = OrdLine.OrdNo
        AND OrdLine.ProdNo = Product.ProdNo
    GROUP BY OrderTbl.OrdNo;


SELECT OrderTbl.OrdNo, SUM(Qty*ProdPrice) AS TotOrdAmt
```

```
   FROM OrderTbl INNER JOIN OrdLine ON OrderTbl.OrdNo = OrdLine.OrdNo
        INNER JOIN Product ON OrdLine.ProdNo = Product.ProdNo
   WHERE OrdDate = '23-Jan-2021'
   GROUP BY OrderTbl.OrdNo;
```

PostgreSQL solutions with alternative date format

```
SELECT OrderTbl.OrdNo, SUM(Qty*ProdPrice) AS TotOrdAmt
  FROM OrderTbl, OrdLine, Product
  WHERE OrdDate = '2021-01-23'
     AND OrderTbl.OrdNo = OrdLine.OrdNo
     AND OrdLine.ProdNo = Product.ProdNo
  GROUP BY OrderTbl.OrdNo;
```

```
SELECT OrderTbl.OrdNo, SUM(Qty*ProdPrice) AS TotOrdAmt
  FROM OrderTbl INNER JOIN OrdLine ON OrderTbl.OrdNo = OrdLine.OrdNo
        INNER JOIN Product ON OrdLine.ProdNo = Product.ProdNo
  WHERE OrdDate = '2021-01-23'
  GROUP BY OrderTbl.OrdNo;
```

4.
```
SELECT OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName,
        SUM(Qty*ProdPrice) AS TotOrdAmt
  FROM OrderTbl, OrdLine, Product, Customer
  WHERE OrdDate = '23-Jan-2021'
     AND OrderTbl.OrdNo = OrdLine.OrdNo
     AND OrdLine.ProdNo = Product.ProdNo
     AND Customer.CustNo = OrderTbl.CustNo
  GROUP BY OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName;
```

```
SELECT OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName,
        SUM(Qty*ProdPrice) AS TotOrdAmt
  FROM OrderTbl INNER JOIN OrdLine ON OrderTbl.OrdNo = OrdLine.OrdNo
        INNER JOIN Product ON OrdLine.ProdNo = Product.ProdNo
        INNER JOIN Customer ON Customer.CustNo = OrderTbl.CustNo
  WHERE OrdDate = '23-Jan-2021'
  GROUP BY OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName;
```

PostgreSQL solutions with alternative date format

```
SELECT OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName,
        SUM(Qty*ProdPrice) AS TotOrdAmt
  FROM OrderTbl, OrdLine, Product, Customer
  WHERE OrdDate = '2021-01-23'
     AND OrderTbl.OrdNo = OrdLine.OrdNo
```

```
        AND OrdLine.ProdNo = Product.ProdNo
        AND Customer.CustNo = OrderTbl.CustNo
  GROUP BY OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName;


SELECT OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName,
        SUM(Qty*ProdPrice) AS TotOrdAmt
  FROM OrderTbl INNER JOIN OrdLine ON OrderTbl.OrdNo = OrdLine.OrdNo
        INNER JOIN Product ON OrdLine.ProdNo = Product.ProdNo
        INNER JOIN Customer ON Customer.CustNo = OrderTbl.CustNo
  WHERE OrdDate = '2021-01-23'
  GROUP BY OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName;
```

5.
```
SELECT OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName, EmpFirstName,
        EmpLastName, SUM(Qty*ProdPrice) AS TotOrdAmt,
        COUNT(*) AS ProductCount
  FROM OrderTbl, OrdLine, Product, Customer, Employee
  WHERE OrdDate = '23-Jan-2021'
        AND OrderTbl.OrdNo = OrdLine.OrdNo
        AND OrdLine.ProdNo = Product.ProdNo
        AND Customer.CustNo = OrderTbl.CustNo
        AND OrderTbl.EmpNo = Employee.EmpNo
  GROUP BY OrderTbl.OrdNo, OrdDate, CustFirstName, CustLastName,
            EmpFirstName, EmpLastName
  HAVING COUNT(*) > 2;
```


6.
```
INSERT INTO Customer
  (CustNo, CustFirstName, CustLastName, CustStreet, CustCity, CustState,
  CustZip, CustBal)
VALUES ('C9999999', 'Michael', 'Mannino', '123 Any Street', 'MyTown', 'CO',
        '80217-0211', 500);
```

7.
```
INSERT INTO Employee
  ( EmpNo, EmpFirstName, EmpLastName, EmpPhone, EmpCommRate, EmpEmail)
VALUES ('E9999999', 'Mary', 'Mannino', '(720)543-1234', 0.04,
'Mary.Mannino@abc.com');
```

8.
```
UPDATE Product
  SET ProdPrice = ProdPrice * 1.1
  WHERE ProdName LIKE '%Ink Jet%';
```

9.

```
DELETE FROM Customer
  WHERE CustNo = 'C9999999';

DELETE FROM Employee
  WHERE EmpNo = 'E9999999';
```