Homework 3

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Assignment 3

Problem 1: List the countries in ascending alphabetical order where Classic Models has offices. (5)

SELECT DISTINCT country FROM Offices



Problem 2: List the EmployeeNumber, LastName, FirstName, Extension for all employees working at the San Francisco office. (6)

SELECT employeeNumber, lastName, firstName
FROM employees e INNER JOIN offices o
ON e.officeCode = o.officeCode
WHERE o.city = 'San Francisco';

	employeeNumber	lastName	firstName
	1002	Murphy	Diane
	1056	Patterson	Mary
	1076	Firrelli	Jeff
	1143	Bow	Anthony
	1165	Jennings	Leslie
	1166	Thompson	Leslie
þ-w	NULL	NULL	NULL

Problem 3: List the ProductCode, ProductName, ProductVendor, QuantityInStock and ProductLine for all products in the Vintage Cars product line with a BuyPrice between \$50 and \$60. (4)

SELECT productCode, productName, productVendo r, quantityInStock, productLine

	productCode	productName	productVendor	quantityInStock	productLine
١	S18_2325	1932 Model A Ford J-Coupe	Autoart Studio Design	9354	Vintage Cars
	S18_3320	1917 Maxwell Touring Car	Exoto Designs	7913	Vintage Cars
	S18_4522	1904 Buick Runabout	Exoto Designs	8290	Vintage Cars
	S24_4258	1936 Chrysler Airflow	Second Gear Diecast	4710	Vintage Cars
	NULL	NULL	NULL	NULL	NULL

```
FROM products

WHERE productline = 'Vintage Cars'

AND buyPrice BETWEEN 50 AND 60;
```

Problem 4: (Use a SUBQUERY) List the ProductCode, ProductName, ProductVendor, BuyPrice and MSRP for the least expensive (lowest MSRP) product sold by ClassicModels. ("MSRP" is the Manufacturer's Suggested Retail Price.) (1)

```
SELECT productCode, productName, product
Vendor, buyPrice,
Min(MSRP)
FROM products;
```

Problem 5: What is the ProductName and Profit of the product that has the highest profit (profit = MSRP minus BuyPrice). (1)

SELECT productName, MAX(MSRP)
FROM products;

	productName	MAX(MSRP)
•	1969 Harley Davidson Ultimate Chopper	214.30

Problem 6: List the country and the number of customers from that country for all countries having more than 6 customers. List the countries sorted in ascending alphabetical order. Title the column heading for the count of customers as "Customers". (4)

SELECT country, COUNT(customerName) AS 'Cus
tomers'
 FROM customers
 GROUP BY country
 HAVING COUNT(customerName) > 6
 ORDER BY country ASC;

	country	Customers
	France	12
	Germany	13
>	Spain	7
	USA	36

Problem 7: List the ProductCode, ProductName, and count of orders for the products supplied by Welly Diecast Productions. Title the column heading for the count of orders as "OrderCount". (8)

```
SELECT p.productCode, p.productName, COUNT(*) AS 'OrderCount'

FROM products p INNER JOIN orderdetails od

ON p.productCode = od.productCode

WHERE p.productVendor = 'Welly Diecast Productions'

GROUP BY p.productCode, p.productName;
```

Problem 8: List the EmployeeNumber, Firstname + Lastname (concatenated into one column in the answer set, separated by a blank and referred to as 'Name') for all the employees reporting to William Patterson or Mary Patterson. (7)

```
SELECT e1.employeeNumber, CONCAT(e1.firstName, ' ',e1.lastN
ame) AS 'Name'
                                                                              employeeNumber Name
  FROM employees e1 INNER JOIN employees e2
                                                                              1088
                                                                                          William Patterson
    ON e1.reportsT0 = e2.employeeNumber
                                                                              1102
                                                                                         Gerard Bondur
                                                                              1143
                                                                                          Anthony Bow
    WHERE (e2.firstName = 'William' or e2.firstName = 'Mar
                                                                             1621
                                                                                         Mami Nishi
y')
                                                                              1611
                                                                                          Andy Fixter
                                                                                         Peter Marsh
                                                                              1612
      AND e2.lastName = 'Patterson';
                                                                             1619
                                                                                          Tom King
```

Problem 9: List the EmployeeNumber, LastName, FirstName of the CEO of the company (the one employee with no boss.) (1)

```
SELECT employeeNumber, lastName, firstName
FROM employees
WHERE reportsTo IS NULL;

employeeNumber lastName firstName

| 1002 | Murphy Diane
```

Problem 10: List the ProductName for all products in the "Motorcycles" product line from the 1990's. (3)

```
SELECT productName, productLine
FROM products
WHERE productLine = 'Motorcycles'
```

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AND LEFT(productName, 4) BETWEEN 1990 AND 2000;

	productName	productLine
•	1996 Moto Guzzi 1100i	Motorcycles
	1997 BMW R 1100 S	Motorcycles
	1997 BMW F650 ST	Motorcycles

Problem 11: When customers place orders, they indicate when they need to receive the merchandise they purchased. (Orders.RequiredDate). Create a report that shows orders shipped in November 2004 that were shipped less than 3 days before their required date. (8)

```
SELECT *
FROM orders
WHERE (shippedDate BETWEEN '2004-11
-01' AND '2004-11-30')
AND DATEDIFF(requiredDate, shipped Date) < 3;
```

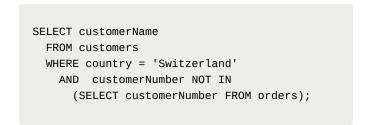
	orderNumber	orderDate	requiredDate	shippedDate	status	comments	customerNumber
١	10316	2004-11-01	2004-11-09	2004-11-07	Shipped	Customer requested that ad materials (such as	240
	10318	2004-11-02	2004-11-09	2004-11-07	Shipped	NULL	157
	10322	2004-11-04	2004-11-12	2004-11-10	Shipped	Customer has worked with some of our vendors	363
	10331	2004-11-17	2004-11-23	2004-11-23	Shipped	Customer requested special shippment. The inst	486
	10336	2004-11-20	2004-11-26	2004-11-24	Shipped	Customer requested that DHL is used for this sh	172
	10339	2004-11-23	2004-11-30	2004-11-30	Shipped	NULL	398
	10341	2004-11-24	2004-12-01	2004-11-29	Shipped	NULL	382
	10342	2004-11-24	2004-12-01	2004-11-29	Shipped	NULL	114

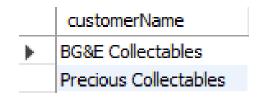
Problem 12: List the firstname, lastname of employees who are Sales Reps who have no assigned customers. (2)

SELECT DISTINCT employeeNumber, e.firstName, e.lastName
FROM employees e LEFT JOIN customers c
ON c.salesRepEmployeeNumber = e.employeeNumber
WHERE c.salesRepEmployeeNumber IS NULL;

	employeeNumber	firstName	lastName
•	1002	Diane	Murphy
	1056	Mary	Patterson
	1076	Jeff	Firrelli
	1088	William	Patterson
	1102	Gerard	Bondur
	1143	Anthony	Bow
	1619	Tom	King
	1625	Yoshimi	Kato

Problem 13: List the customername of customers from Switzerland with no orders. (2)





Problem 14: List the customername and total quantity of products ordered for customers who have ordered more than 1700 products across all their orders. (6)

```
INSERT INTO TopCustomers

SELECT CustomerNumber, CURDATE() AS Contact
Date, OrderCount, OrderTotal

FROM (SELECT customerNumber, COUNT(custom
erNumber) AS OrderCount, SUM(priceEach*quan
tityOrdered)AS OrderTotal

FROM orders o
LEFT JOIN orderdetails od
ON od.orderNumber = o.orderNumber
GROUP BY customerNumber) AS subqu
WHERE subqu.OrderTotal > 1500000
GROUP BY customerNumber
ORDER BY customerNumber;
```

customerName	SUM(od.quantityOrdered)
Australian Collectors, Co.	1926
La Rochelle Gifts	1832
Mini Gifts Distributors Ltd.	6366
Euro + Shopping Channel	9327
Muscle Machine Inc	1775
AV Stores, Co.	1778

Problem 15: Create a NEW table named "TopCustomers" with four columns: CustomerNumber (integer), ContactDate (DATE), OrderCount, (integer) and OrderTotal (a decimal number with 9 digits in total having two decimal places). None of these columns can be NULL. Include a PRIMARY KEY constraint named "TopCustomer PK" on CustomerNumber. (no answer set)

```
CREATE TABLE IF NOT EXISTS TopCustomers(
   Customernumber INT NOT NULL,
   ContactDate DATE NOT NULL,
   OrderCount INT NOT NULL,
   OrderTotal DECIMAL(9,2) NOT NULL,
   CONSTRAINT TopCustomer_PK PRIMARY KEY (CustomerNumber)
   );
```

Problem 16: Populate the new table "TopCustomers" with the CustomerNumber, today's date, and the total count of all their orders, and the value of all their orders (PriceEach * quantityOrdered) for those customers whose order total value is greater than \$150,000. (inserted 7 rows, no answer set)

```
SELECT CustomerNumber, CURDATE() AS ContactDate, OrderCount, OrderTotal
FROM (SELECT customerNumber, COUNT(customerNumber) AS OrderCount, SUM(priceEach*quantity
Ordered)AS OrderTotal
FROM orders
```

```
LEFT JOIN orderdetails
ON orderdetails.orderNumber = orders.orderNumber
GROUP BY customerNumber) AS OrderCalc
WHERE OrderCalc.OrderTotal > 150000
GROUP BY customerNumber
ORDER BY customerNUMBER;
```

Problem 17: List the contents of the TopCustomers table in descending Order Value sequence. (7)



	Customernumber	ContactDate	OrderCount	OrderTotal
•	141	2022-10-09	259	820689.54
	124	2022-10-09	180	591827.34
	114	2022-10-09	55	180585.07
	151	2022-10-09	48	177913.95
	119	2022-10-09	53	158573.12
	148	2022-10-09	43	156251.03
	323	2022-10-09	46	154622.08

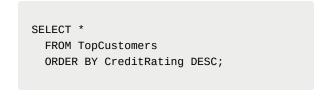
Problem 18: Add a new column to the TopCustomers table called CreditRating (integer). (No answer set)

```
ALTER TABLE TopCustomers ADD CreditRating INT;
```

Problem 19: Update the Top Customers table, setting the CreditRating column to a random number (from 0 to 9). (Should update 7 rows) HINT: use the RAND() and FLOOR() functions. (No answer set)

```
UPDATE TopCustomers SET CreditRating = FLOOR(RAND()*(9-0+1))+0;
```

Problem 20: List the contents of the TopCustomers table in descending CreditRating sequence. (7)



	Customernumber	ContactDate	OrderCount	OrderTotal	CreditRating
•	148	2022-10-09	43	156251.03	8
	323	2022-10-09	46	154622.08	6
	119	2022-10-09	53	158573.12	2
	124	2022-10-09	180	591827.34	1
	114	2022-10-09	55	180585.07	0
	141	2022-10-09	259	820689.54	0
	151	2022-10-09	48	177913.95	0

Problem 21: Drop the TopCustomers table. (no answer set)

DROP TABLE TopCustomers;