

# 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
```

	country
▶	Australia
	France
	Japan
	UK
	USA

**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
▶*	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, productVendor,
quantityInStock,
productLine
```

	productCode	productName	productVendor	quantityInStock	productLine
▶	518_2325	1932 Model A Ford J-Coupe	Autoart Studio Design	9354	Vintage Cars
	518_3320	1917 Maxwell Touring Car	Exoto Designs	7913	Vintage Cars
	518_4522	1904 Buick Runabout	Exoto Designs	8290	Vintage Cars
•	524_4258	1936 Chrysler Airflow	Second Gear Diecast	4710	Vintage Cars

```
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;
```

	productCode	productName	productVendor	buyPrice	Min(MSRP)
▶	510_1678	1969 Harley Davidson Ultimate Chopper	Min Lin Diecast	48.81	33.19

**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;
```

productCode	productName	OrderCount
S12_1666	1958 Setra Bus	28
S12_3148	1969 Corvair Monza	27
S12_3380	1968 Dodge Charger	27
S12_4675	1969 Dodge Charger	27
S18_1749	1917 Grand Touring Sedan	25
S18_2625	1936 Harley Davidson E1 Knucklehead	28
S24_3371	1971 Alpine Renault 1600s	27
S700_3962	The Queen Mary	27

**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.lastName) AS 'Name'
FROM employees e1 INNER JOIN employees e2
ON e1.reportsTo = e2.employeeNumber
WHERE (e2.firstName = 'William' or e2.firstName = 'Mary')
AND e2.lastName = 'Patterson';
```

employeeNumber	Name
1088	William Patterson
1102	Gerard Bondur
1143	Anthony Bow
1621	Mami Nishi
1611	Andy Fixter
1612	Peter Marsh
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'
```

```
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, shippedDate) < 3;
```

orderNumber	orderDate	requiredDate	shippedDate	status	comments	customerNumber
▶ 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		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 shipment. 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		398
10341	2004-11-24	2004-12-01	2004-11-29	Shipped		382
10342	2004-11-24	2004-12-01	2004-11-29	Shipped		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)

```
SELECT customerName
FROM customers
WHERE country = 'Switzerland'
AND customerNumber NOT IN
(SELECT customerNumber FROM orders);
```

	customerName
▶	BG&E Collectables
	Precious Collectables

**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 > 150000
      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)**

```

SELECT *
FROM TopCustomers
ORDER BY OrderTotal DESC;

```

	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)**

```

SELECT *
FROM TopCustomers
ORDER BY CreditRating DESC;

```

	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

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

```
DROP TABLE TopCustomers;
```