

1. List all the information in the Offices table. (7)

ANSWER:

Select * from offices;

officeCode	city	phone	addressLine1	addressLine2	state	country	postalCode	territory
1	San Francisco	+1 650 219 4782	100 Market Street	Suite 300	CA	USA	94080	NA
2	Boston	+1 215 837 0825	1550 Court Place	Suite 102	MA	USA	02107	NA
3	NYC	+1 212 555 3000	523 East 53rd Street	apt. 5A	NY	USA	10022	NA
4	Paris	+33 14 723 4404	43 Rue Jouffroy D'abbans	NULL	NULL	France	75017	EMEA
5	Tokyo	+81 33 224 5000	4-1 Kioicho	NULL	NULL	Chiyoda-Ku Japan	102-8578	Japan
6	Sydney	+61 2 9264 2451	5-11 Wentworth Avenue	Floor #2	NULL	Australia	NSW 2010	APAC
7	London	+44 20 7877 2041	25 Old Broad Street	Level 7	NULL	UK	EC2N 1HN	EMEA

2. List the EmployeeNumber, LastName, FirstName, Extension for all employees working out of the Paris, France office. (5)

ANSWER:

SELECT EmployeeNumber, LastName, FirstName, Extension FROM employees
WHERE OfficeCode = 4;

EmployeeNumber	LastName	FirstName	Extension
1102	Bondur	Gerard	x5408
1337	Bondur	Loui	x6493
1370	Hernandez	Gerard	x2028
1401	Castillo	Pamela	x2759
1702	Gerard	Martin	x2312

3. List the ProductCode, ProductName, ProductVendor, QuantityInStock for all products in the "Classic Cars" product line with a QuantityInStock between 5000 and 7000. (7)

ANSWER:

SELECT ProductCode, ProductName, ProductVendor, QuantityInStock FROM
Products WHERE ProductLine = 'Classic Cars' and QuantityInStock > 3000
and QuantityInStock < 5000;

ProductCode	ProductName	ProductVendor	QuantityInStock
S10_4757	1972 Alfa Romeo GTA	Motor City Art Classics	3252
S12_1108	2001 Ferrari Enzo	Second Gear Diecast	3619
S18_1129	1993 Mazda RX-7	Highway 66 Mini Classics	3975
S18_2238	1998 Chrysler Plymouth Prowler	Gearbox Collectibles	4724
S18_4933	1957 Ford Thunderbird	Studio M Art Models	3209
S24_1444	1970 Dodge Coronet	Highway 66 Mini Classics	4074
S24_3191	1969 Chevrolet Camaro Z28	Exoto Designs	4695

4. 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)

ANSWER:

```
SELECT ProductCode, ProductName, ProductVendor, BuyPrice, min(MSRP) FROM
Products WHERE ProductVendor = 'ClassicModels';
```

ProductCode	ProductName	ProductVendor	BuyPrice	min(MSRP)
NULL	NULL	NULL	NULL	NULL

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

ANSWER:

```
SELECT ProductName, MSRP, BuyPrice, max(MSRP - BuyPrice) as Profit FROM
Products;
```

ProductName	MSRP	BuyPrice	Profit
1969 Harley Davidson Ultimate Chopper	95.70	48.81	115.72

6. List the country and the number of customers from that country for all countries having five or more customers. List the countries sorted in descending order from highest to lowest number of customers. (6)

ANSWER:

```
SELECT Country, C.Count FROM (SELECT Country, count(*) as Count FROM
Customers Group By Country) as C WHERE Count >= 5 ORDER BY Count desc;
```

Country	Count
USA	36
Germany	13
France	12
Spain	7
Australia	5
UK	5

7. List the ProductCode, ProductName, and number of orders for the product with the most orders. (1)

ANSWER:

```
SELECT OrderDet.ProductCode, Products.ProductName,
max(OrderDet.ProductCount) as AmountOrdered FROM (SELECT ProductCode,
Count(*) as ProductCount FROM OrderDetails Group By ProductCode) AS
OrderDet JOIN Products on Products.ProductCode = OrderDet.ProductCode;
```

ProductCode	ProductName	AmountOrdered
S10_1678	1969 Harley Davidson Ultimate Chopper	53

8. List the EmployeeNumber, Firstname + Lastname (concatenated into one column in the answer set, separated by a blank) for all the employees reporting to Anthony Bow. (6)

ANSWER:

```
SELECT EmployeeNumber, concat(FirstName, ' ', LastName) AS EmployeeName
FROM Employees WHERE reportsTo = 1143;
```

EmployeeNumber	EmployeeName
1165	Leslie Jennings
1166	Leslie Thompson
1188	Julie Firrelli
1216	Steve Patterson
1286	Foon Yue Tseng
1323	George Vanauf

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

ANSWER:

```
SELECT EmployeeNumber, LastName, FirstName FROM Employees WHERE reportsTo
IS NULL;
```

EmployeeNumber	LastName	FirstName
1002	Murphy	Diane

10. List the ProductName for all products in the "Classic Cars" product line from the 1950's. (6)

ANSWER:

```
SELECT ProductName, C.ProductYear FROM (Select ProductName,
substring(ProductName,1,4) as ProductYear FROM Products WHERE ProductLine
= 'Classic Cars') as C WHERE ProductYear >= '1950' and ProductYear <
'1960';
```

ProductName	ProductYear
1952 Alpine Renault 1300	1952
1957 Corvette Convertible	1957
1957 Ford Thunderbird	1957
1958 Chevy Corvette Limited Edition	1958
1952 Citroen-15CV	1952
1956 Porsche 356A Coupe	1956

11. List the month name and the total number of orders for the month in 2003 in which ClassicModels customers placed the most orders. (1)

ANSWER:

```
SELECT OrderMonth, max(TotalMonthOrders) as TotalNumberOfOrders FROM
(SELECT *, COUNT(*) as TotalMonthOrders FROM (SELECT *,
SUBSTRING(OrderDate, 1, 4) as Year, SUBSTRING(OrderDate, 6, 2) AS
OrderMonth FROM Orders) as c WHERE Year = '2003' Group By OrderMonth) as
w;
```

OrderMonth	TotalNumberOfOrders
01	30

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

ANSWER:

```
SELECT FirstName, LastName FROM Employees WHERE JobTitle = 'Sales Rep'
AND Not Exists (SELECT * FROM customers WHERE SalesRepEmployeeNumber =
EmployeeNumber);
```

```
+-----+-----+
| FirstName | LastName |
+-----+-----+
| Tom       | King     |
| Yoshimi   | Kato     |
+-----+-----+
```

13. List the customername of customers from Spain with no orders. (2)

ANSWER:

```
SELECT CustomerName FROM Customers WHERE Country = 'Spain' AND NOT EXISTS
(SELECT * FROM Orders WHERE CustomerNumber = Customers.CustomerNumber);
```

```
+-----+
| CustomerName |
+-----+
| ANG Resellers |
| Anton Designs, Ltd. |
+-----+
```

14. List the customername and total quantity of products ordered for customers who have ordered more than 2000 products across all their orders. (2)

ANSWER:

```
SELECT CustomerName, OrderQuantity FROM (SELECT CustomerNumber,
sum(quantityOrdered) as OrderQuantity FROM OrderDetails JOIN Orders ON
Orders.OrderNumber = OrderDetails.OrderNumber GROUP BY CustomerNumber) as
C JOIN Customers on C.CustomerNumber = Customers.CustomerNumber WHERE
OrderQuantity > 2000;
```

```
+-----+-----+
| CustomerName | OrderQuantity |
+-----+-----+
| Mini Gifts Distributors Ltd. | 6366 |
| Euro+ Shopping Channel | 9327 |
+-----+-----+
```

15. Create a NEW table named "TopCustomers" with three columns: CustomerNumber (integer), ContactDate (DATE) 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)

ANSWER:

```
DROP TABLE IF EXISTS `TopCustomers`;
```

```
CREATE TABLE `TopCustomers`(  
    `CustomerNumber` Int NOT NULL,  
    `ContactDate` Date NOT NULL,  
    `OrderTotal` Decimal(9) NOT NULL,  
    CONSTRAINT TopCustomer_PK PRIMARY KEY (`CustomerNumber`)  
);
```

16. Populate the new table "TopCustomers" with the CustomerNumber, today's date, and the total 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)

ANSWER:

```
INSERT INTO topCustomers(CustomerNumber, Contactdate, Ordertotal) SELECT  
customers.CustomerNumber, CurDate(), sum(PriceEach * quantityOrdered) AS  
Cost FROM Customers, Orders, OrderDetails WHERE Customers.CustomerNumber  
= Orders.CustomerNumber AND Orders.OrderNumber = OrderDetails.OrderNumber  
GROUP BY Customers.CustomerNumber HAVING Cost > 150000;
```

```
select * FROM topcustomers;
```

CustomerNumber	ContactDate	OrderTotal
114	2018-10-28	180585
119	2018-10-28	158573
124	2018-10-28	591827
141	2018-10-28	820690
148	2018-10-28	156251
151	2018-10-28	177914
323	2018-10-28	154622

17. List the contents of the TopCustomers table in descending OrderTotal sequence. (7)

ANSWER:

```
SELECT * FROM topCustomers ORDER BY OrderTotal desc;
```

CustomerNumber	ContactDate	OrderTotal
141	2018-10-28	820690
124	2018-10-28	591827
114	2018-10-28	180585
151	2018-10-28	177914
119	2018-10-28	158573
148	2018-10-28	156251
323	2018-10-28	154622

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

ANSWER:

```
ALTER TABLE TopCustomers ADD COLUMN OrderCount int;
```

Query OK, 0 rows affected (0.69 sec)
Records: 0 Duplicates: 0 Warnings: 0

```
SELECT * FROM TopCustomers;
```

CustomerNumber	ContactDate	OrderTotal	OrderCount
114	2018-10-28	180585	NULL
119	2018-10-28	158573	NULL
124	2018-10-28	591827	NULL
141	2018-10-28	820690	NULL
148	2018-10-28	156251	NULL
151	2018-10-28	177914	NULL
323	2018-10-28	154622	NULL

19. Update the Top Customers table, setting the OrderCount column to a random number (from 0 to 20). (Should update 7 rows) HINT: use the RAND() and FLOOR() functions.

ANSWER:

```
UPDATE TopCustomers SET OrderCount = Floor(Rand()*20) WHERE OrderCount IS NULL;
```

Query OK, 7 rows affected (0.20 sec)
Rows matched: 7 Changed: 7 Warnings: 0

```
mysql> SELECT * FROM TopCustomers;
```

CustomerNumber	ContactDate	OrderTotal	OrderCount
114	2018-10-28	180585	15
119	2018-10-28	158573	17
124	2018-10-28	591827	19
141	2018-10-28	820690	3
148	2018-10-28	156251	19
151	2018-10-28	177914	8
323	2018-10-28	154622	2

20. List the contents of the TopCustomers table in descending OrderCount sequence. (7)

ANSWER:

```
SELECT * FROM TopCustomers ORDER BY OrderCount desc;
```

CustomerNumber	ContactDate	OrderTotal	OrderCount
124	2018-10-28	591827	19
148	2018-10-28	156251	19
119	2018-10-28	158573	17
114	2018-10-28	180585	15
151	2018-10-28	177914	8
141	2018-10-28	820690	3
323	2018-10-28	154622	2

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

ANSWER:

```
DROP TABLE TopCustomers;
```