1.1 Write a query that lists all Customers in either Paris or London. Include Customer ID, Company Name and all address fields.

```
SELECT CustomerID, CompanyName, Address
FROM Customers
WHERE City='Paris' OR City='London'
```

1.2 List all products stored in bottles.

```
SELECT *
FROM Products p
WHERE p.QuantityPerUnit LIKE '%bottle%'
```

1.3 Repeat question above, but add in the Supplier Name and Country.

```
SELECT p.ProductID AS "Product ID",
   p.ProductName AS "Product Name",
   s.CompanyName AS "Company Name",
   s.Country AS "Country"
FROM Products p
JOIN Suppliers s ON p.SupplierID = s.SupplierID
WHERE p.QuantityPerUnit LIKE '%bottle%'
```

1.4 Write an SQL Statement that shows how many products there are in each category. Include Category Name in result set and list the highest number first.

```
SELECT c.CategoryName AS "Category",
   COUNT(*) AS "Number of products in Category"
FROM Products p
JOIN Categories c ON p.CategoryID = c.CategoryID
GROUP BY c.CategoryName
ORDER BY COUNT(*) DESC
```

1.5 List all UK employees using concatenation to join their title of courtesy, first name and last name together. Also include their city of residence.

```
SELECT CONCAT(e.TitleOfCourtesy,' ',e.FirstName,' ',e.LastName) AS "Employee",
   e.City AS "City of Residence"
```

```
FROM Employees e
WHERE e.Country = 'UK'
```

1.6 List Sales Totals for all Sales Regions (via the Territories table using 4 joins) with a Sales Total greater than 1,000,000. Use rounding or FORMAT to present the numbers.

```
SELECT r.RegionDescription,
ROUND(SUM(od.Quantity * od.UnitPrice * (1 - od.Discount)),2) total_sales
FROM  [Order Details] od
INNER JOIN Orders o ON o.OrderID = od.OrderID
INNER JOIN EmployeeTerritories et ON et.EmployeeID = o.EmployeeID
INNER JOIN Territories t ON t.TerritoryID = et.TerritoryID
INNER JOIN Region r ON r.RegionID = t.RegionID
GROUP BY r.RegionDescription
HAVING ROUND(SUM(od.Quantity * od.UnitPrice),2) >1000000
```

1.7 Count how many Orders have a Freight amount greater than 100.00 and either USA or UK as Ship Country.

```
SELECT COUNT(OrderID) AS "Orders", o.ShipCountry AS "Ship Country"
FROM Orders o
WHERE ShipCountry IN ('UK', 'USA')
AND o.Freight > 100
GROUP BY o.ShipCountry
```

1.8 Write an SQL Statement to identify the Order Number of the Order with the highest amount(value) of discount applied to that order.

```
SELECT (od.UnitPrice*od.Quantity*od.Discount) AS "Biggest_amount_of_discount", od.OrderID
FROM [Order Details] od
WHERE od.UnitPrice*od.Discount*od.Quantity = (SELECT MAX(orr.UnitPrice*orr.Discount*orr.Quantity) FROM
[Order Details] orr)
ORDER BY Biggest_amount_of_discount DESC
```

2.1 Write the correct SQL statement to create the following table:
Spartans Table – _include details about all the Spartans on this course. Separate Title,
First Name and Last Name into separate columns, and include University attended, course taken and mark achieved.
Add any other columns you feel would be appropriate.

```
CREATE DATABASE sidhant_db
USE sidhant_db
CREATE TABLE Spartans_table
(
   Title VARCHAR(20),
   firstName VARCHAR(20),
   lastName VARCHAR(20),
   universityAttended VARCHAR(20),
   courseTaken VARCHAR(20),
   markAchieved INT,
   tieGame VARCHAR(20),

)
```

IMPORTANT NOTE: For data protection reasons do NOT include date of birth in this exercise.
2.2 Write SQL statements to add the details of the Spartans in your course to the table you have created.

```
SELECT * FROM Spartans_table --SELECT everything from a table
INSERT INTO
Spartans_table(Title, firstName, lastName, universityAttended, courseTaken, markAchieved, tieGame)
VALUES
('Mr.', 'Josh', 'Weeden', 'Oxford', 'All of them', '80', 'Blue-STRONG'),
('Mr.', 'Nathan', 'Johnston', 'Susex', 'IDK', '100', 'STRONG'),
('Mr.', 'Asakar', 'Hussain', 'Middlesex', 'CS','100', 'BOW-TIE'),
('Mr.' , 'Sidhant', 'Khosla', 'Brunel', 'Business','100' , 'FANCY')
```

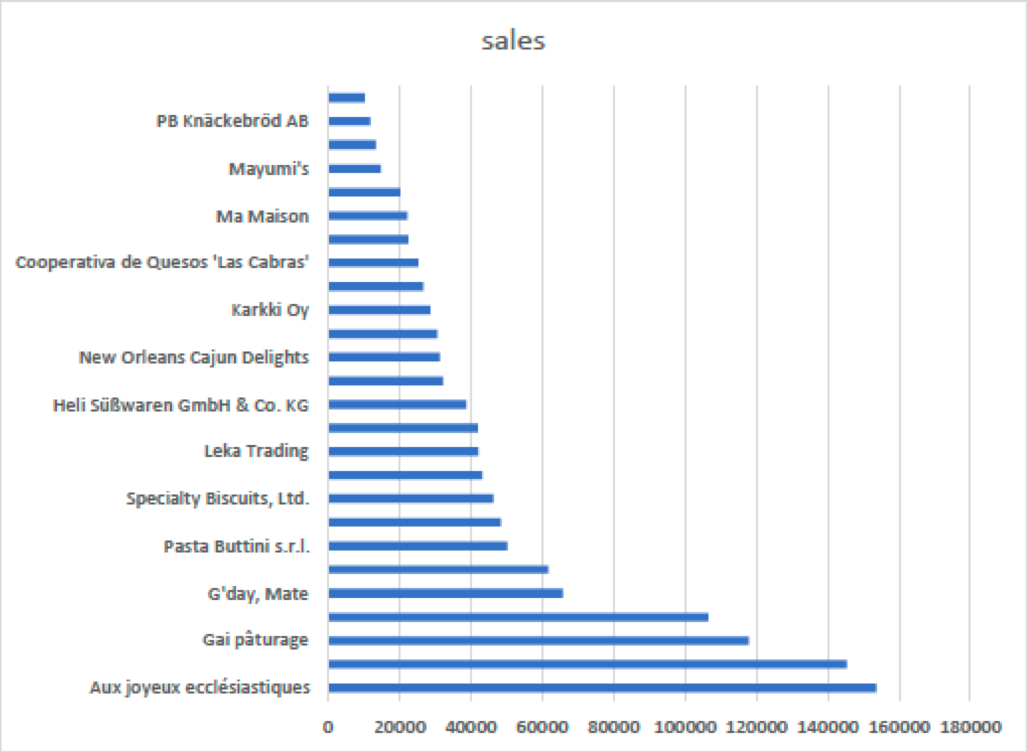
3.1 List all Employees from the Employees table and who they report to.

```
SELECT CONCAT(e.TitleOfCourtesy, e.FirstName, ' ' ,e.LastName) AS "Employee Name",
CONCAT(id.TitleOfCourtesy, id.FirstName, ' ' ,id.LastName) AS 'Report To'
FROM Employees e
LEFT JOIN Employees id
ON id.EmployeeID=e.ReportsTo
```

3.2 List all Suppliers with total sales over $10,000 in the Order Details table. Include the Company Name from the Suppliers Table

```
SELECT s.CompanyName,
   ROUND(SUM(od.Quantity*(od.UnitPrice-od.UnitPrice*od.Discount)),2) AS "Total Sales"
```

```
FROM Suppliers s
JOIN Products p ON s.SupplierID = p.SupplierID
JOIN [Order Details] od ON p.ProductID = od.ProductID
GROUP BY s.CompanyName
HAVING SUM(od.Quantity*(od.UnitPrice-od.UnitPrice*od.Discount)) > 10000
```

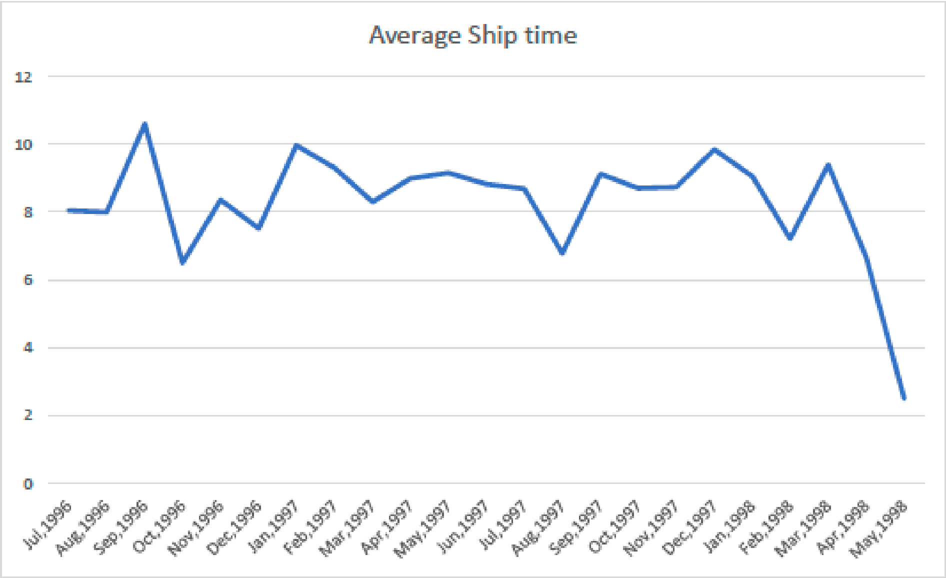


3.3 List the Top 10 Customers YTD for the latest year in the Orders file. Based on total value of orders shipped. No Excel required

```
SELECT TOP 10 c.CompanyName AS "Company Name",
  ROUND(SUM(od.Quantity*(od.UnitPrice-od.UnitPrice*od.Discount)),2) AS "Total Value Of Orders Shipped"
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
JOIN [Order Details] od ON o.OrderID = od.OrderID
WHERE YEAR(o.OrderDate)=(SELECT MAX(YEAR(oo.OrderDate)) FROM Orders oo)
GROUP BY c.CompanyName
ORDER BY "Total value of orders shipped" DESC
```

3.4 Plot the Average Ship Time by month for all data in the Orders Table using a line chart as below.

```
SELECT AVG(DATEDIFF(DAY,o.OrderDate,o.ShippedDate)) AS "Average Ship Time",
   FORMAT(o.OrderDate,'MMM-yyyy') AS "Month"
FROM Orders o
GROUP BY FORMAT(o.OrderDate,'MMM-yyyy'),DATEPART(YEAR, o.OrderDate), DATEPART(MONTH,
o.OrderDate)
ORDER BY DATEPART(YEAR, o.OrderDate),DATEPART(MONTH, o.OrderDate)
```


Average Ship time
Jul,1996
Aug,1996
Sep,1996
Oct,1996
Nov,1996
Dec,1996
Jan,1997
Feb,1997
Mar,1997
Apr,1997
May,1997
Jun,1997
Jul,1997
Aug,1997
Sep,1997
Oct,1997
Nov,1997
Dec,1997
Jan,1998
Feb,1998
Mar,1998
Apr,1998
May,1998