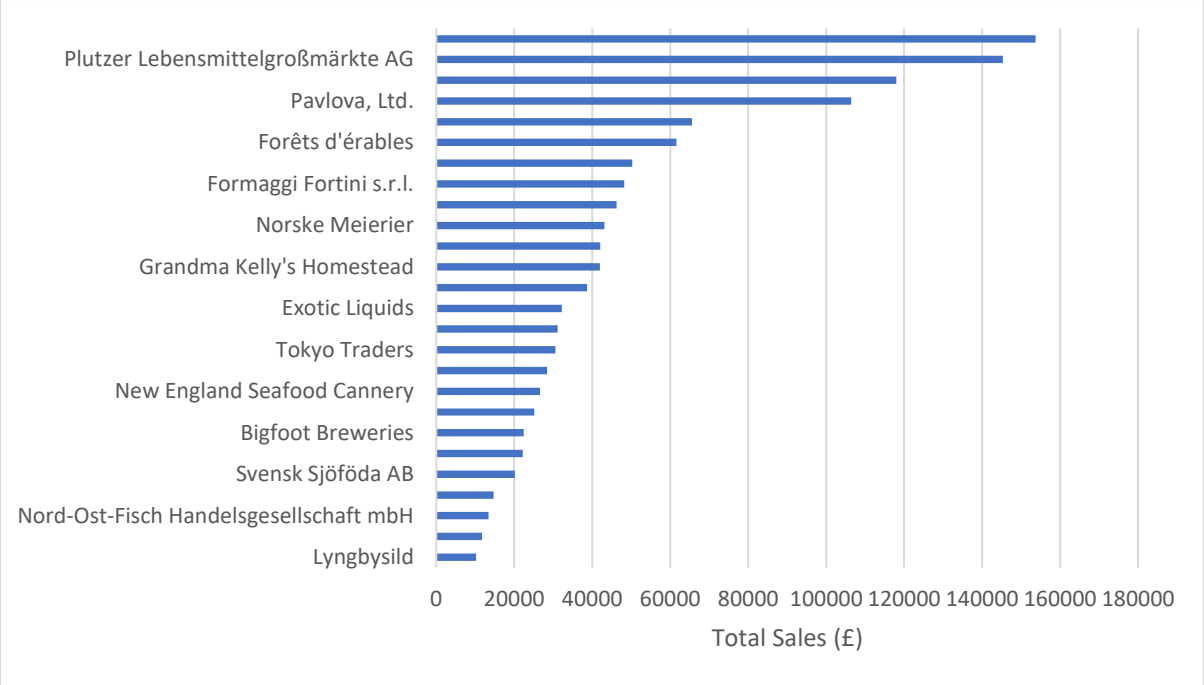
```sql
--1

USE Northwind;

--1.1

SELECT CustomerID, CompanyName, Address, City, Region, PostalCode, Country
FROM Customers
WHERE City IN ('Paris', 'London');

--1.2

SELECT * FROM Products
WHERE QuantityPerUnit LIKE ('%bottles');

--1.3

SELECT Products.*, Suppliers.CompanyName, Suppliers.Country
FROM Products
INNER JOIN Suppliers ON Products.SupplierID = Suppliers.SupplierID
WHERE Products.QuantityPerUnit LIKE ('%bottles');

--1.4

SELECT Products.CategoryID, Categories.CategoryName, COUNT(*) AS 'number of products'
FROM Products
INNER JOIN Categories ON Products.CategoryID = Categories.CategoryID
GROUP BY Products.CategoryID, Categories.CategoryName
ORDER BY 'number of products' DESC;

--1.5

SELECT
       TitleOfCourtesy + ' ' + FirstName + ' ' + LastName AS 'Employee Full name',
       City
FROM Employees
WHERE Country = 'UK';

--1.6

SELECT Region.RegionID, ROUND(SUM([Order Details].UnitPrice*[Order Details].Quantity*(1-
[Order Details].Discount)),2) AS Sales
FROM [Order Details]
INNER JOIN Orders ON [Order Details].OrderID = Orders.OrderID
INNER JOIN EmployeeTerritories ON Orders.EmployeeID = EmployeeTerritories.EmployeeID
INNER JOIN Territories ON EmployeeTerritories.TerritoryID = Territories.TerritoryID
INNER JOIN Region ON Territories.RegionID = Region.RegionID
GROUP BY Region.RegionID
HAVING ROUND(SUM([Order Details].UnitPrice*[Order Details].Quantity*(1-
[Order Details].Discount)),2) > 1000000;

--1.7

SELECT COUNT(*) AS "Count"
FROM Orders
WHERE Freight > 100.00 AND ShipCountry IN ('USA', 'UK');

--1.8

SELECT TOP 1 ProductID, UnitPrice*Quantity*Discount AS "Value"
FROM [Order Details]
ORDER BY "Value" DESC;
```

```sql
--2

USE Josh_db;

--2.1

CREATE TABLE spartans_table (
    spartan_id INT IDENTITY(1,1) PRIMARY KEY,
    title VARCHAR(255),
    first_name VARCHAR(255),
    last_name VARCHAR(255),
    university VARCHAR(255),
    course VARCHAR(255),
    mark_achieved VARCHAR(255),
);

--2.2

INSERT INTO spartans_table VALUES
('Lord', 'Ben', 'Middlehurst','Bath', 'Mechanical Engineering', '2:1'),
('Mr', 'Josh', 'Weeden','Surrey', 'Mechanical Engineering', '2:1'),
('Mr', 'Sidhant', 'Khosla','York', 'Computer Science', '1st'),
('Mr', 'Jamie', 'Hammond','Loughborough', 'Computer Science', '2:1'),
('Mr', 'Ben', 'Balls','Exeter', 'Politics', '2:1'),
('Mr', 'Ahmed', 'Rahman','Cambridge', 'Computer Science', '2:1'),
('Mr', 'Alex', 'Ng','Oxford', 'Computer Science', '1st'),
('Mr', 'Andrei', 'Pavel','Newcastle', 'Maths', '1st'),
('Mr', 'Asakar', 'Hussain','Edinburgh', 'Computer Science', '1st'),
('Mr', 'Daniel', 'Alldritt','UCL', 'Electrical Engineering', '1st'),
('Mr', 'Gregory', 'Spratt','York', 'Maths', '2:1'),
('Mr', 'Ismail', 'Kadir','Nottingham', 'Computer Science', '2:1'),
('Mr', 'James', 'Fletcher','Reading', 'Electrical Engineering', '2:1'),
('Mr', 'Nathan', 'Johnson','Leeds', 'Computer Science', '1st'),
('Mr', 'Rashawn', 'Henry','Exeter', 'Computer Science', '1st'),
('Mr', 'Timin', 'Rickaby','Reading', 'Mechanical Engineering', '2:1'),
('Mr', 'Yusuf', 'Uddin','Southampton', 'Maths', '2:1');
```

```sql
--3

USE Northwind;

--3.1

SELECT
    b.FirstName + ' ' + b.LastName AS "Full name",
    a.FirstName + ' ' + a.LastName AS "Reports to"
FROM Employees a, Employees b
WHERE a.EmployeeID = b.ReportsTo;

--
This above is known as a cartesian join, try to avoid this as it often takes a lot of memor
y, the better way is to use a self join:

SELECT
       a.FirstName + ' ' + a.LastName AS "Full name",
       b.FirstName + ' ' + b.LastName AS "Reports to"
FROM Employees a
LEFT JOIN Employees b ON a.ReportsTo = b.EmployeeID

--3.2

SELECT
    Suppliers.CompanyName,
    ROUND(SUM([Order Details].UnitPrice*[Order Details].Quantity*(1-
[Order Details].Discount)),2) AS Total_Sales
FROM Suppliers
INNER JOIN Products ON Suppliers.SupplierID = Products.SupplierID
INNER JOIN [Order Details] ON Products.ProductID = [Order Details].ProductID
GROUP BY Suppliers.CompanyName
HAVING ROUND(SUM([Order Details].UnitPrice*[Order Details].Quantity*(1-
[Order Details].Discount)),2) > 10000
ORDER BY Total_Sales;

--3.3

SELECT TOP 10
    C.CompanyName,
    ROUND(SUM(OD.UnitPrice*OD.Quantity),2) AS "Total Value"
FROM Customers C
INNER JOIN Orders ON C.CustomerID = Orders.CustomerID
INNER JOIN [Order Details] OD ON Orders.OrderID = OD.Orderid
WHERE Orders.OrderDate >= '1998-01-01'
GROUP BY C.CompanyName
ORDER BY 'Total Value' DESC

--3.4

SELECT FORMAT(OrderDate, 'yyyy/MM') AS "Year/Month", AVG(DATEDIFF(d, OrderDate, ShippedDate
)) AS 'Average order time in days'
FROM Orders
GROUP BY FORMAT(OrderDate, 'yyyy/MM')
```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Forêts d'érables
Formaggi Fortini s.r.l.
Norske Meierier
Grandma Kelly's Homestead
Exotic Liquids
Tokyo Traders
New England Seafood Cannery
Bigfoot Breweries
Svensk Sjöföda AB
Nord-Ost-Fisch Handelsgesellschaft mbH
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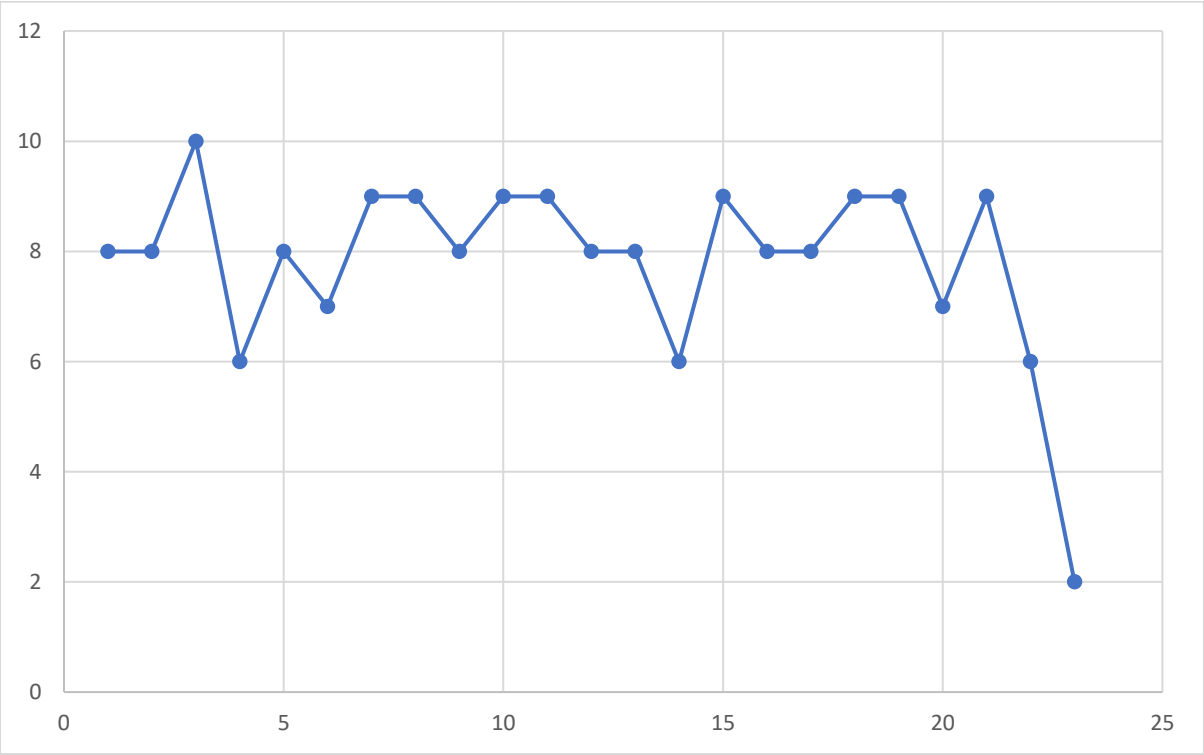
Total Sales (£)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