Practical 5 b DBMS - JOINS
Output:

1) Natural Joins

mysql> SELECT * FROM Orders NATURAL JOIN OrderDetails LIMIT 20;

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID	OrderDetailID	ProductID	Quantity
10248	90	5	1996-07-04	3	1	11	12
10248	90	5	1996-07-04	3	2	42	10
10248	90	5	1996-07-04	3	3	72	5
10249	81	6	1996-07-05	1	4	14	9
10249	81	6	1996-07-05	1	5	51	40
10250	34	4	1996-07-08	2	6	41	10
10250	34	4	1996-07-08	2	7	51	35
10250	34	4	1996-07-08	2	8	65	15
10251	84	3	1996-07-08	1	9	22	6
10251	84	3	1996-07-08	1	10	57	15
10251	84	3	1996-07-08	1	11	65	20
10252	76	4	1996-07-09	2	12	20	40
10252	76	4	1996-07-09	2	13	33	25
10252	76	4	1996-07-09	2	14	60	40
10253	34	3	1996-07-10	2	15	31	20
10253	34	3	1996-07-10	2	16	39	42
10253	34	3	1996-07-10	2	17	49	40
10254	14	5	1996-07-11	2	18	24	15
10254	14	5	1996-07-11	2	19	55	21
10254	14	5	1996-07-11	2	20	74	21

20 rows in set (0.00 sec)

mysql> SELECT * FROM Orders NATURAL JOIN Shippers LIMIT 20;

ShipperID	OrderID	CustomerID	EmployeeID	OrderDate	ShipperName	Phone
1	10249	81	6	1996-07-05	Speedy Express	(503) 555-9831
1	10251	84	3	1996-07-08	Speedy Express	(503) 555-9831
1	10258	20	1	1996-07-17	Speedy Express	(503) 555-9831
1	10260	55	4	1996-07-19	Speedy Express	(503) 555-9831

```
|         1 |   10265 |         7 |         2 | 1996-07-25 | Speedy Express | (503) 555-9831 |
|         1 |   10267 |        25 |         4 | 1996-07-29 | Speedy Express | (503) 555-9831 |
|         1 |   10269 |        89 |         5 | 1996-07-31 | Speedy Express | (503) 555-9831 |
|         1 |   10270 |        87 |         1 | 1996-08-01 | Speedy Express | (503) 555-9831 |
|         1 |   10274 |        85 |         6 | 1996-08-06 | Speedy Express | (503) 555-9831 |
|         1 |   10275 |        49 |         1 | 1996-08-07 | Speedy Express | (503) 555-9831 |
|         1 |   10280 |         5 |         2 | 1996-08-14 | Speedy Express | (503) 555-9831 |
|         1 |   10281 |        69 |         4 | 1996-08-14 | Speedy Express | (503) 555-9831 |
|         1 |   10282 |        69 |         4 | 1996-08-15 | Speedy Express | (503) 555-9831 |
|         1 |   10284 |        44 |         4 | 1996-08-19 | Speedy Express | (503) 555-9831 |
|         1 |   10288 |        66 |         4 | 1996-08-23 | Speedy Express | (503) 555-9831 |
|         1 |   10290 |        15 |         8 | 1996-08-27 | Speedy Express | (503) 555-9831 |
|         1 |   10296 |        46 |         6 | 1996-09-03 | Speedy Express | (503) 555-9831 |
|         1 |   10309 |        37 |         3 | 1996-09-19 | Speedy Express | (503) 555-9831 |
|         1 |   10317 |        48 |         6 | 1996-09-30 | Speedy Express | (503) 555-9831 |
|         1 |   10323 |        39 |         4 | 1996-10-07 | Speedy Express | (503) 555-9831 |
+-----------+---------+-----------+-----------+------------+----------------+----------------+
20 rows in set (0.00 sec)
```

2)Group by and having clause

```
mysql> SELECT COUNT(CustomerID), Country
    -> FROM Customers
    -> GROUP BY Country;
+-------------------+-------------+
| COUNT(CustomerID) | Country     |
+-------------------+-------------+
|                 3 | Argentina   |
|                 2 | Austria     |
|                 2 | Belgium     |
|                 9 | Brazil      |
|                 3 | Canada      |
|                 2 | Denmark     |
|                 2 | Finland     |
|                11 | France      |
|                11 | Germany     |
|                 1 | Ireland     |
|                 3 | Italy       |
|                 5 | Mexico      |
|                 1 | Norway      |
|                 1 | Poland      |
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|                 2 | Portugal    |
|                 5 | Spain       |
|                 2 | Sweden      |
|                 2 | Switzerland |
|                 7 | UK          |
|                13 | USA         |
|                 4 | Venezuela   |
+-------------------+-------------+
21 rows in set (0.00 sec)

mysql> SELECT COUNT(CustomerID), Country
    -> FROM Customers
    -> GROUP BY Country
    -> ORDER BY COUNT(CustomerID) DESC;
+-------------------+-------------+
| COUNT(CustomerID) | Country     |
+-------------------+-------------+
|                13 | USA         |
|                11 | Germany     |
|                11 | France      |
|                 9 | Brazil      |
|                 7 | UK          |
|                 5 | Mexico      |
|                 5 | Spain       |
|                 4 | Venezuela   |
|                 3 | Canada      |
|                 3 | Argentina   |
|                 3 | Italy       |
|                 2 | Switzerland |
|                 2 | Austria     |
|                 2 | Portugal    |
|                 2 | Belgium     |
|                 2 | Denmark     |
|                 2 | Sweden      |
|                 2 | Finland     |
|                 1 | Ireland     |
|                 1 | Norway      |
|                 1 | Poland      |
+-------------------+-------------+
21 rows in set (0.00 sec)

mysql> SELECT COUNT(CustomerID), Country
```

```
    -> FROM Customers
    -> GROUP BY Country
    -> HAVING COUNT(CustomerID) > 5;
+-------------------+---------+
| COUNT(CustomerID) | Country |
+-------------------+---------+
|                 9 | Brazil  |
|                11 | France  |
|                11 | Germany |
|                 7 | UK      |
|                13 | USA     |
+-------------------+---------+
5 rows in set (0.00 sec)
```

3)Order by clause

```
mysql> SELECT * FROM Customers
    -> ORDER BY Country
    -> LIMIT 20;
```

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
12	Cactus Comidas para llevar	Patricio Simpson	Cerrito 333	Buenos Aires	1010	Argentina
54	Océano Atlántico Ltda.	Yvonne Moncada	Ing. Gustavo Moncada 8585 Piso 20-A	Buenos Aires	1010	Argentina
64	Rancho grande	Sergio Gutiérrez	Av. del Libertador 900	Buenos Aires	1010	Argentina
20	Ernst Handel	Roland Mendel	Kirchgasse 6	Graz	8010	Austria
59	Piccolo und mehr	Georg Pipps	Geislweg 14	Salzburg	5020	Austria
50	Maison Dewey	Catherine Dewey	Rue Joseph-Bens 532	Bruxelles	B-1180	Belgium
76	Suprêmes délices	Pascale Cartrain	Boulevard Tirou, 255	Charleroi	B-6000	Belgium
15	Comércio Mineiro	Pedro Afonso	Av. dos Lusíadas, 23	São Paulo	05432-043	Brazil
21	Familia Arquibaldo	Aria Cruz	Rua Orós, 92	São Paulo	05442-030	Brazil
31	Gourmet Lanchonetes	André Fonseca	Av. Brasil, 442	Campinas	04876-786	Brazil
34	Hanari Carnes	Mario Pontes	Rua do Paço, 67	Rio de Janeiro	05454-876	Brazil
61	Que Delícia	Bernardo Batista	Rua da Panificadora, 12	Rio de Janeiro	02389-673	Brazil
62	Queen Cozinha	Lúcia Carvalho	Alameda dos Canàrios, 891	São Paulo	05487-020	Brazil
67	Ricardo Adocicados	Janete Limeira	Av. Copacabana, 267	Rio de Janeiro	02389-890	Brazil
81	Tradição Hipermercados	Anabela Domingues	Av. Inês de Castro, 414	São Paulo	05634-030	Brazil
88	Wellington Importadora	Paula Parente	Rua do Mercado, 12	Resende	08737-363	Brazil
10	Bottom-Dollar Marketse	Elizabeth Lincoln	23 Tsawassen Blvd.	Tsawassen	T2F 8M4	Canada
42	Laughing Bacchus Wine Cellars	Yoshi Tannamuri	1900 Oak St.	Vancouver	V3F 2K1	Canada
51	Mère Paillarde	Jean Fresnière	43 rue St. Laurent	Montréal	H1J 1C3	Canada
73	Simons bistro	Jytte Petersen	Vinbæltet 34	København	1734	Denmark

20 rows in set (0.01 sec)

```
mysql> SELECT * FROM Customers
    -> ORDER BY Country, CustomerName
    -> LIMIT 20;
```

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
12	Cactus Comidas para llevar	Patricio Simpson	Cerrito 333	Buenos Aires	1010	Argentina
54	Océano Atlántico Ltda.	Yvonne Moncada	Ing. Gustavo Moncada 8585 Piso 20-A	Buenos Aires	1010	Argentina
64	Rancho grande	Sergio Gutiérrez	Av. del Libertador 900	Buenos Aires	1010	Argentina
20	Ernst Handel	Roland Mendel	Kirchgasse 6	Graz	8010	Austria
59	Piccolo und mehr	Georg Pipps	Geislweg 14	Salzburg	5020	Austria
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15	Comércio Mineiro	Pedro Afonso	Av. dos Lusíadas, 23	São Paulo	05432-043	Brazil
21	Familia Arquibaldo	Aria Cruz	Rua Orós, 92	São Paulo	05442-030	Brazil
31	Gourmet Lanchonetes	André Fonseca	Av. Brasil, 442	Campinas	04876-786	Brazil
34	Hanari Carnes	Mario Pontes	Rua do Paço, 67	Rio de Janeiro	05454-876	Brazil
61	Que Delícia	Bernardo Batista	Rua da Panificadora, 12	Rio de Janeiro	02389-673	Brazil
62	Queen Cozinha	Lúcia Carvalho	Alameda dos Canàrios, 891	São Paulo	05487-020	Brazil
67	Ricardo Adocicados	Janete Limeira	Av. Copacabana, 267	Rio de Janeiro	02389-890	Brazil
81	Tradição Hipermercados	Anabela Domingues	Av. Inês de Castro, 414	São Paulo	05634-030	Brazil
88	Wellington Importadora	Paula Parente	Rua do Mercado, 12	Resende	08737-363	Brazil
10	Bottom-Dollar Marketse	Elizabeth Lincoln	23 Tsawassen Blvd.	Tsawassen	T2F 8M4	Canada
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73	Simons bistro	Jytte Petersen	Vinbæltet 34	København	1734	Denmark

20 rows in set (0.00 sec)