

To filter out those bill number, item name, company name and city and the bill amount for each bill, which items are available in foods table, and their manufacturer must have enlisted to supply that item, and no NULL value for manufacturer are not allowed.

The statement will first join all rows from the counter_sale table and only those rows from the foods table where the joined fields are matching and if the ON clause matches no records in the foods table, the join will still return rows, but the NULL in each column of the right table.

Therefore this result will join with company table and all rows from result table and matched and unmatched rows from company table will also come, but for the unmatched rows of company table, the column value will be NULL. Therefore the WHERE clause will eliminate those rows which company name column value is NULL and after that, the ORDER BY clause will arrange the rows in ascending order according to the bill number.

NOTE: USE THE TABLES: COUNTER_SALE, FOODS, AND COMPANY.

Counter_Sale Table

```
MariaDB [joins]> create table counter_sale (
  -> bill_no int primary key,
  -> item_id int,
  -> sl_qty int,
  -> sl_rate int,
  -> bill_amount int,
  -> foreign key (item_id) references foods(item_id));
Query OK, 0 rows affected (0.055 sec)
```

```
MariaDB [joins]> desc counter_sale
-> ;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| bill_no    | int(11)   | NO   | PRI | NULL    |       |
| item_id    | int(11)   | YES  | MUL | NULL    |       |
| sl_qty     | int(11)   | YES  |     | NULL    |       |
| sl_rate    | int(11)   | YES  |     | NULL    |       |
| bill_amount | int(11)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.034 sec)
```

```
MariaDB [joins]> select * from counter_sale;
+-----+-----+-----+-----+-----+
| bill_no | item_id | sl_qty | sl_rate | bill_amount |
+-----+-----+-----+-----+-----+
| 1001    | 1       | 10     | 20      | 100         |
| 1002    | 2       | 20     | 40      | 200         |
| 1003    | 3       | 30     | 60      | 300         |
| 1004    | 4       | 40     | 80      | 400         |
| 1005    | 5       | 50     | 100     | 500         |
| 1006    | 6       | 60     | 120     | 600         |
+-----+-----+-----+-----+-----+
6 rows in set (0.001 sec)
```

Foods Table

```
MariaDB [joins]> create table foods (  
->   item_id int primary key,  
->   item_name varchar(100) not null,  
->   item_unit varchar(50),  
->   company_id int,  
->   foreign key (company_id) references companies(company_id)  
-> );  
Query OK, 0 rows affected (0.060 sec)
```

```
MariaDB [joins]> desc foods;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| item_id    | int(11)       | NO   | PRI | NULL    |       |  
| item_name  | varchar(100)  | NO   |     | NULL    |       |  
| item_unit  | varchar(50)   | YES  |     | NULL    |       |  
| company_id | int(11)       | YES  | MUL | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.035 sec)
```

```
MariaDB [joins]> select * from foods;  
+-----+-----+-----+-----+  
| item_id | item_name | item_unit | company_id |  
+-----+-----+-----+-----+  
| 1       | Popcorn  | Pcs      | 14         |  
| 2       | Oatmeal  | Pcs      | 12         |  
| 3       | Banana   | Pcs      | 11         |  
| 4       | Pretzels | Pcs      | 13         |  
| 5       | Apple    | Pcs      | 10         |  
| 6       | Grapes   | Pcs      | 10         |  
| 7       | Melon    | Pcs      | NULL       |  
+-----+-----+-----+-----+  
7 rows in set (0.000 sec)
```

Companies Table

```
MariaDB [joins]> desc companies;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| company_id | int(11)       | NO   | PRI | NULL    |       |  
| company_name | varchar(100)  | NO   |     | NULL    |       |  
| company_city | varchar(100)  | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.027 sec)
```

```

MariaDB [joins]> create table companies (
  -> company_id int primary key,
  -> company_name varchar(100) not null,
  -> company_city varchar(100));
Query OK, 0 rows affected (0.010 sec)

```

```

MariaDB [joins]> select * from companies;
+-----+-----+-----+
| company_id | company_name | company_city |
+-----+-----+-----+
|          10 | ApplesComp   | Pasig        |
|          11 | BananaSplit  | Escalante    |
|          12 | Quaker       | London       |
|          13 | Jack n Jil   | Wachington   |
|          14 | PopNPop      | Cebu         |
+-----+-----+-----+
5 rows in set (0.000 sec)

```

The search collects details on sales activities, such as the bill number, item name, company name, city, and bill amount. It brings together information from the counter_sale, foods, and companies tables by connecting them through shared identifiers like item_id and company_id. The results are filtered to exclude rows where the company name is 'NULL', and the final output is sorted by bill number in ascending order.

```

MariaDB [joins]> select counter_sale.bill_no, foods.item_name, companies.company_name,
  companies.company_city, counter_sale.bill_amount
  -> from counter_sale
  -> left join foods on counter_sale.item_id = foods.item_id
  -> join companies on foods.company_id = companies.company_id
  -> where companies.company_name is not null
  -> order by counter_sale.bill_no asc;
+-----+-----+-----+-----+-----+
| bill_no | item_name | company_name | company_city | bill_amount |
+-----+-----+-----+-----+-----+
|      1001 | Popcorn   | PopNPop      | Cebu         |          100 |
|      1002 | Oatmeal   | Quaker       | London       |          200 |
|      1003 | Banana    | BananaSplit  | Escalante    |          300 |
|      1004 | Pretzels  | Jack n Jil   | Wachington   |          400 |
|      1005 | Apple     | ApplesComp   | Pasig        |          500 |
|      1006 | Grapes    | ApplesComp   | Pasig        |          600 |
+-----+-----+-----+-----+-----+
6 rows in set (0.002 sec)

```