Enter password: ********
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 85
Server version: 8.0.17 MySQL Community Server - GPL

Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE sandwich;
Query OK, 1 row affected (0.26 sec)

mysql>
mysql> CREATE TABLE tastes (
    ->   name VARCHAR(20),
    ->   filling VARCHAR(20),
    ->   PRIMARY KEY (name, filling)
    ->   );
ERROR 1046 (3D000): No database selected
mysql> use sandwich;
Database changed
mysql> CREATE TABLE tastes (
    ->   name VARCHAR(20),
    ->   filling VARCHAR(20),
    ->   PRIMARY KEY (name, filling)
    ->   );
Query OK, 0 rows affected (1.40 sec)

mysql> INSERT INTO tastes
    ->   values ('Brown', 'Turkey'),
    ->   ('Brown', 'Beef'),
    ->   ('Brown', 'Ham'),
    ->   ('Jones', 'Cheese'),
    ->   ('Green', 'Beef'),
    ->   ('Green', 'Turkey'),
    ->   ('Green','Cheese');
Query OK, 7 rows affected (0.21 sec)
Records: 7 Duplicates: 0 Warnings: 0

```
mysql> CREATE TABLE locations (
    ->     LName VARCHAR(30),
    ->     Phone VARCHAR(10),
    ->     Address VARCHAR(50),
    ->     PRIMARY KEY(LName)
    ->     );
Query OK, 0 rows affected (0.61 sec)

mysql> INSERT INTO locations
    ->     VALUES ('Lincoln', '6834523', 'Lincoln Place'),
    ->     ('O\'Neill\'s', '674 2134', 'Pearse St'),
    ->     ('Old Nag', '767 8132', 'Dame St'),
    ->     ('Buttery', '702 3421', 'College St');
Query OK, 4 rows affected (0.21 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> CREATE TABLE sandwiches (
    ->     Location VARCHAR(30),
    ->     Bread VARCHAR(15),
    ->     Filling VARCHAR(20),
    ->     Price FLOAT(5, 2),
    ->     PRIMARY KEY(Location, Bread, Filling),
    ->     FOREIGN KEY(Location) REFERENCES locations(LName)
    ->     );
Query OK, 0 rows affected, 1 warning (0.76 sec)

mysql> INSERT INTO sandwiches
    ->     VALUES('Lincoln', 'Rye', 'Ham', 1.25),
    ->     ('O\'Neill\'s', 'White', 'Cheese', 1.20),
    ->     ('O\'Neill\'s', 'Whole', 'Ham', 1.25),
    ->     ('Old Nag', 'Rye', 'Beef', 1.35),
    ->     ('Buttery', 'White', 'Cheese', 1.00),
    ->     ('O\'Neill\'s', 'White', 'Turkey', 1.35),
    ->     ('Buttery', 'White', 'Ham', 1.10),
    ->     ('Lincoln', 'Rye', 'Beef', 1.35),
    ->     ('Lincoln', 'White', 'Ham', 1.30),
    ->     ('Old Nag', 'Rye', 'Ham', 1.40);
Query OK, 10 rows affected (0.34 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql>
```

(i) places where Jones can eat (using a nested subquery)
mysql>
mysql>
mysql> SELECT Location FROM sandwiches
    ->   WHERE Filling IN((
    ->   SELECT filling FROM tastes
    ->   WHERE name = 'Jones')
    ->   );
+-----------+
| Location |
+-----------+
| Buttery |
| O'Neill's |
+-----------+
2 rows in set (0.05 sec)

mysql>
(ii) places where Jones can eat (without using a nested subquery).
mysql>
mysql> SELECT sandwiches.Location
    ->   FROM tastes JOIN sandwiches
    ->   USING(filling)
    ->   WHERE tastes.name = 'Jones';
+-----------+
| Location |
+-----------+
| Buttery |
| O'Neill's |
+-----------+
2 rows in set (0.00 sec)

mysql>
(iii) for each location the number of people who can eat there.
mysql> SELECT Location, COUNT(DISTINCT name)
    ->   FROM tastes JOIN sandwiches USING (filling)
    ->   GROUP BY Location;

```
+-----------+----------------------+
| Location  | COUNT(DISTINCT name) |
+-----------+----------------------+
| Buttery   |                    3 |
| Lincoln   |                    2 |
| O'Neill's |                    3 |
| Old Nag   |                    2 |
+-----------+----------------------+
4 rows in set (0.07 sec)

mysql>
mysql>
```