Assignment 3
SQL
Winter 2024
Yuan Wang

For given tables and query task, give the query statement, execute the query and show the result.

(All questions have to actually execute query and include the execution results or screen shot.)

Question 1

"Orders" tables

OrderID	CustomerID	OrderDate
10308	2	1996-09-18
10309	37	1996-09-19
10310	77	1996-09-20

"Customers" table

CustomerID	CustomerName	ContactName	Country
1	Alfreds Futterkiste	Maria Anders	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mexico

Task
Show orders (orderID and orderDate) and customers who placed them

Question 2

Products

ProductID	ProductName	CategoryID	Price
1	Chais	1	18
2	Chang	1	19
3	Aniseed Syrup	2	10

Categories

CategoryID	CategoryName	Description
1	Beverages	Soft drinks, coffees, teas, beers, and ales
2	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings
3	Confections	Desserts, candies, and sweet breads

Task
Show product and its category

Question 3

Customers

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico

Orders

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID
10308	2	7	1996-09-18	3
10309	37	3	1996-09-19	1
10310	77	8	1996-09-20	2

Task
Show all customers names , and any orders they might have

```
Question 4
```

Orders

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID
10308	2	7	1996-09-18	3
10309	37	3	1996-09-19	1
10310	77	8	1996-09-20	2

Employees

EmployeeID	LastName	FirstName	BirthDate	Photo
1	Davolio	Nancy	12/8/1968	EmpID1.pic
2	Fuller	Andrew	2/19/1952	EmpID2.pic
3	Leverling	Janet	8/30/1963	EmpID3.pic

Task
Show all employees, and any orders they might have

Question 5

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico

Task
Match all customers that are from the same city
(duplicate pairs is fine,
for example,
(customerA, customerB, cityA) and (customerB, customerA, cityA)
can be both in result)

Question 6

CustomerID	CustomerName	ContactName	Address	City	
Filter	Filter	Filter	Filter	Filter	F
1	Alfreds Futterkiste	Maria Anders	Obere Str. 5 7	Berlin	
2	Ana Trujillo Emparedados	Ana Trujillo	Avda. de la Constitución	México D.F.	
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2 3 1 2	México D.F.	
4	Around the Horn	Thomas Hardy	1 2 0 Hanover Sq.	London	
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	
6	Blauer See Delikatessen	Hanna Moos	Forsterstr. 5 7	Mannheim	
7	Blondel père et fils	Frédérique Citeaux	2 4 place Kléber	Strasbourg	
8	Bólido Comidas preparadas	Martín Sommer	C Araquil 6 7	Madrid	
9	Bon app'	Laurence Lebihans	1 2 rue des Bouchers	Marseille	
1 0	Bottom Dollar Marketse	Elizabeth Lincoln	2 3 Tsawassen Blvd.	Tsawassen	

SupplierID	SupplierName	ContactName	Address	City	
Filter	Filter	Filter	Filter	Filter	
1	Exotic Liquid	Charlotte Cooper	4 9 Gilbert St.	Londona	
2	New Orleans Cajun …	Shelley Burke	P.O. Box 7 8 9 3 4	New Orleans	
3	Grandma Kelly's …	Regina Murphy	7 0 7 Oxford Rd.	Ann Arbor	
4	Tokyo Traders	Yoshi Nagase	9 - 8 Sekimai Musashino-	Tokyo	
5	Cooperativa de Quesos	Antonio del Valle …	Calle del Rosal 4	Oviedo	
6	Mayumi's	Mayumi Ohno	9 2 Setsuko Chuo-ku	Osaka	
7	Pavlova, Ltd.	Ian Devling	7 4 Rose St. Moonie	Melbourne	

Task
Show customers and suppliers that are from same city

Question 7

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

Task
Lists the number of customers in each country.

Task
Lists the number of customers in each country.
Only include countries with more than 5 customers:

Question 8

Following is a JSON object

```
{
  "student_id": "S1001",
  "first_name": "John",
  "last_name": "Doe",
  "age": 20,
  "major": "Computer Science",
  "enrolled_courses": [
    {
      "course_id": "CS101",
      "course_name": "Introduction to Computer Science",
      "credits": 4
    },
    {
      "course_id": "CS102",
      "course_name": "Data Structures and Algorithms",
      "credits": 4
    }
  ],
  "contact_details": {
    "email": "john.doe@example.com",
    "phone": "123-456-7890"
  }
}
```

Table is defined like this

```
CREATE TABLE students (
    id INTEGER PRIMARY KEY,
    student_data TEXT
);
```

Create this table in your database, and finish the following task
(use SQLITE, if you are able to other database, it is also ok)

1. Insert your JSON object into this table.

2. Show the JSON object in the table

3. Retrieve all students first_name and email and phone number

4. Extract all "computer science students"

5. Display list of courses for each student

6. Display first course for all students