

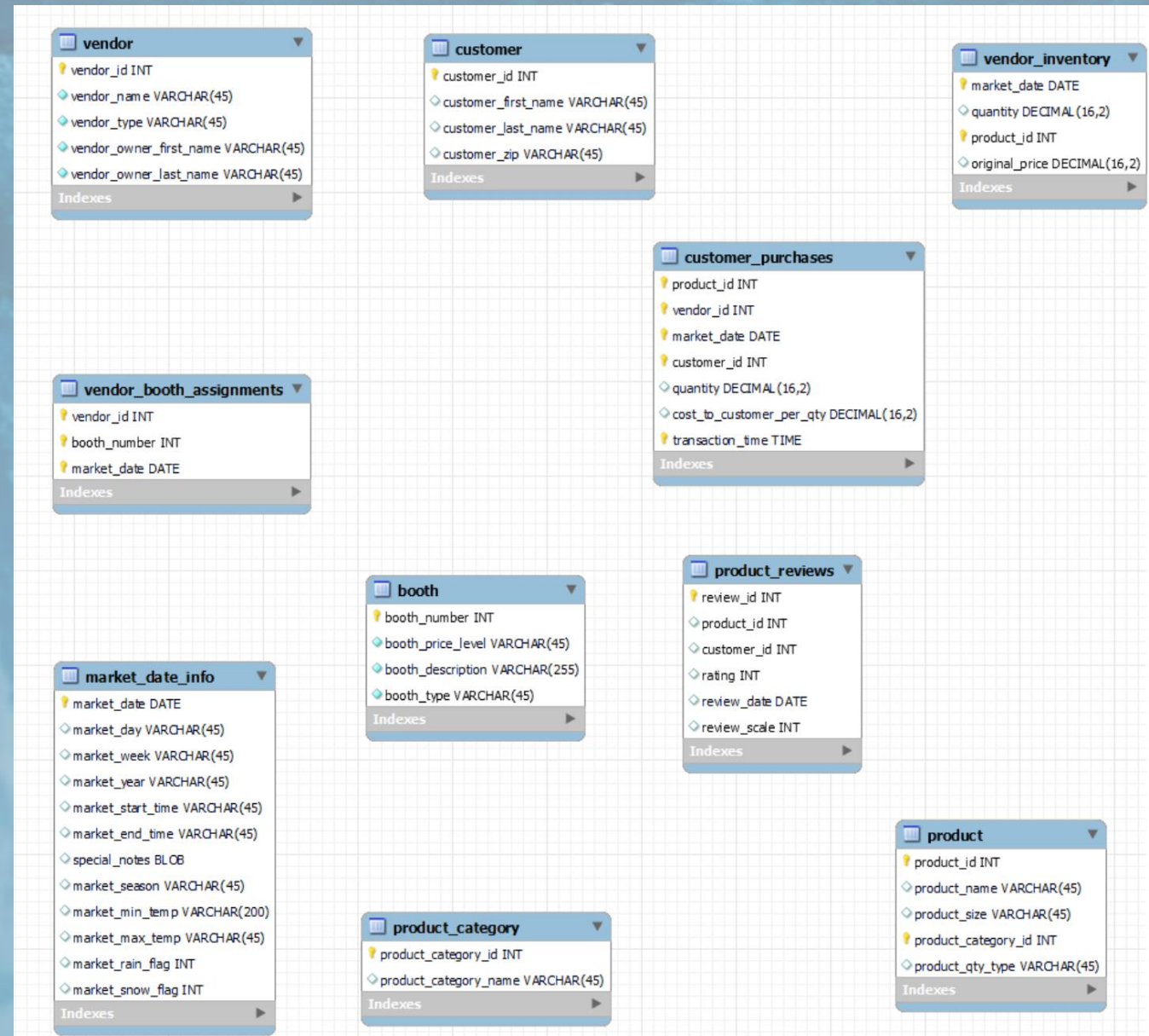
# Lesson plan

Topic	Time
Introducing sakila DB	20 min.
Revising cardinality ratio and participation constraints	40 min.
Workshop on Module 3 queries	45 min.
The query competition	15 min.

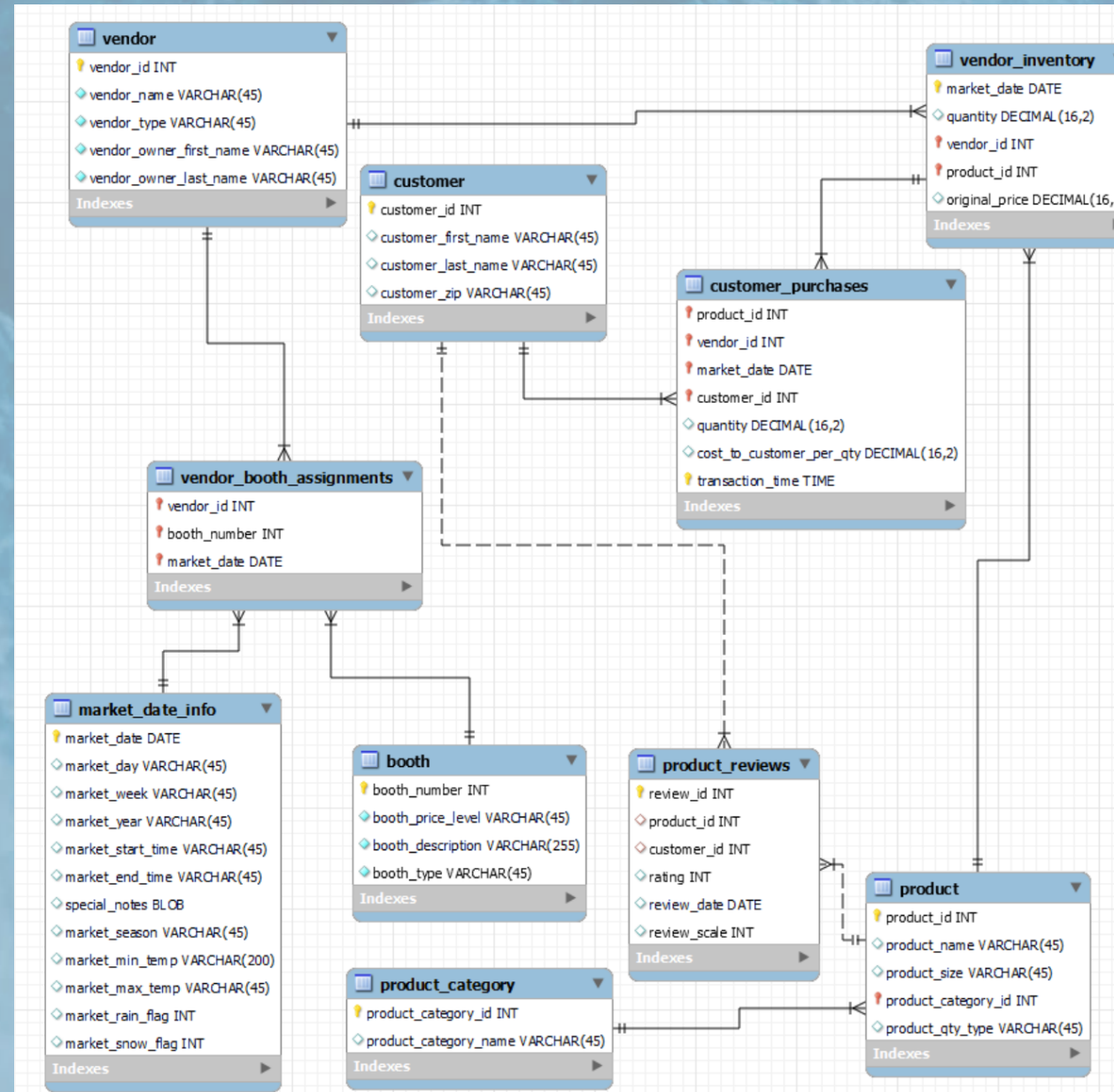
# FarmersMarket DB, no cardinality and participation details

The FarmersMarket database involves eleven tables. Ten of them are shown in the ER diagram given below.

The database records information about vendors, products, booth assignment to vendors, customers, market date and purchases.



# FarmersMarket DB, with cardinality and participation details





# Exploring the classicmodels database

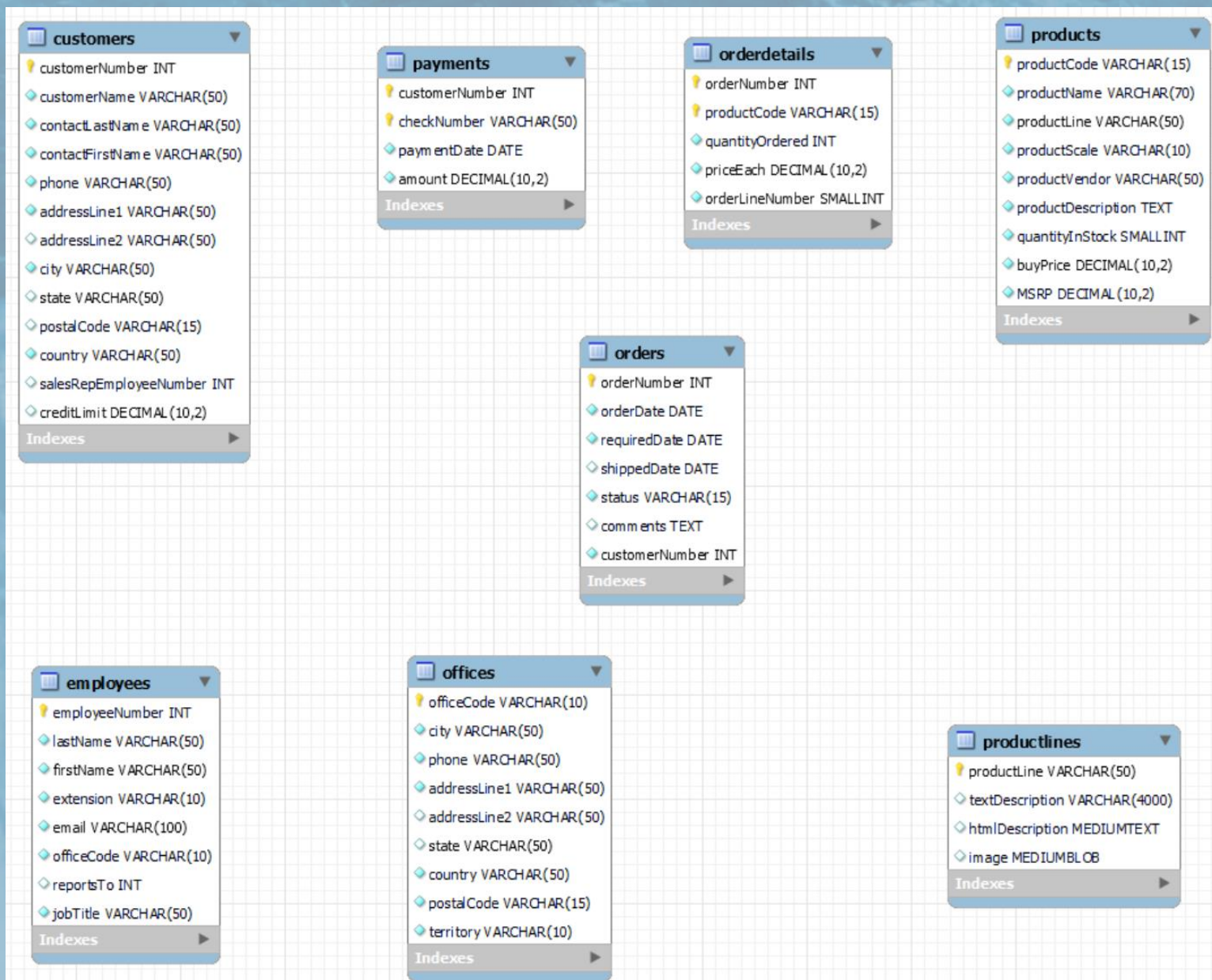
The classicmodels\* database is a retailer of scale models of classic cars. It contains typical business data, including information about customers, products, sales orders, sales order line items, and more.

The classicmodels sample database schema consists of the following tables:

- **customers:** stores customer's data.
- **products:** stores a list of scale model cars.
- **productlines:** stores a list of product lines.
- **orders:** stores sales orders placed by customers.
- **orderdetails:** stores sales order line items for every sales order.
- **payments:** stores payments made by customers based on their accounts.
- **employees:** stores employee information and the organization structure such as who reports to whom.
- **offices:** stores sales office data.

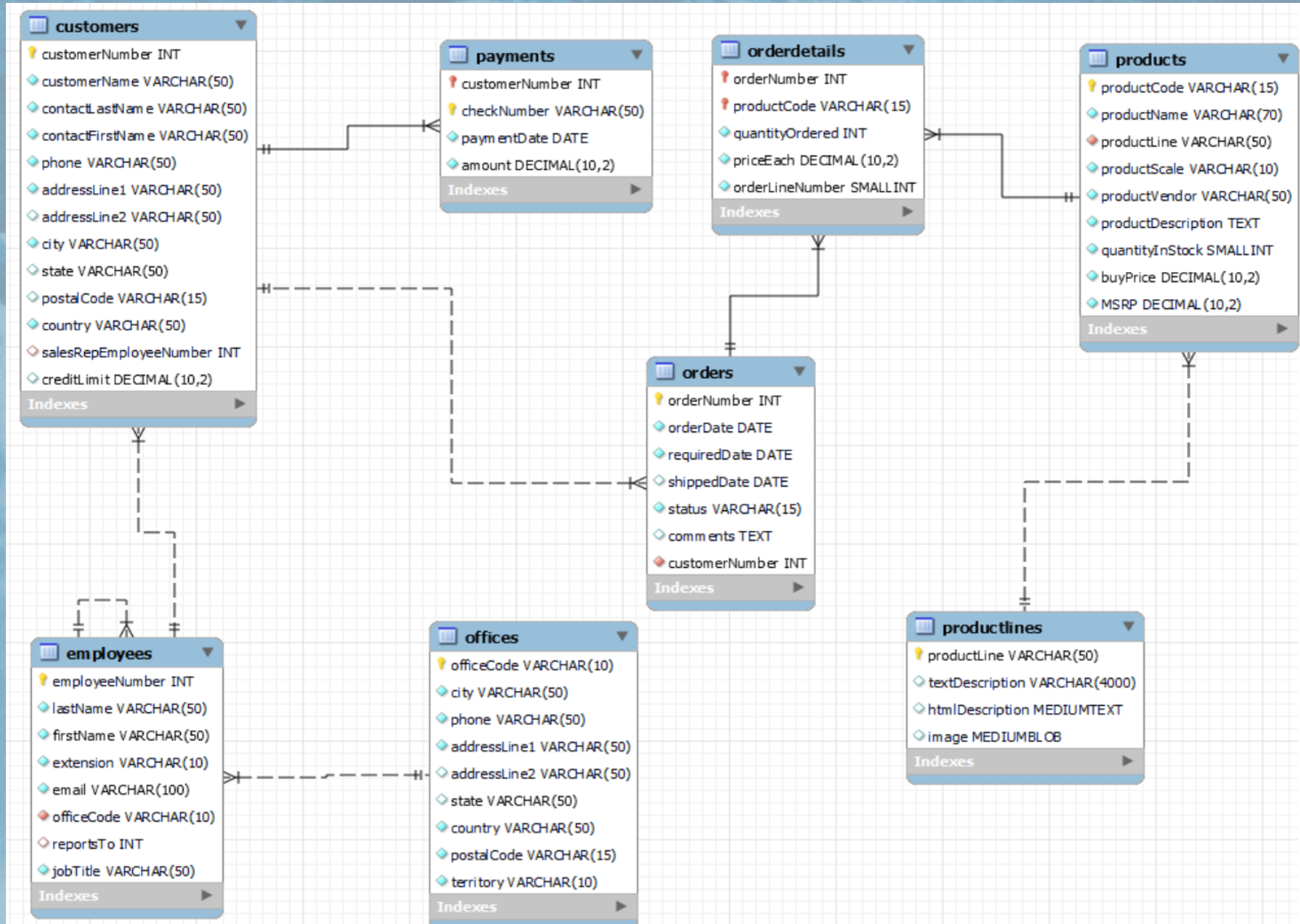
\*<https://www.mysqltutorial.org/getting-started-with-mysql/mysql-sample-database/>

# Classicmodels DB, with no cardinality and participation details





# Classicmodels DB, with cardinality and participation details



## Exercise 1

Prepare a dataset that shows details of the products considered in the classicmodels database. The required details are the product name, product line, product vendor, and product description



```
1  SELECT
2      productName,
3      productLine,
4      productVendor,
5      productDescription
6  FROM classicmodels.products
```

## Exercise 2

In the classicmodels database, it is required to check whether there is an outlier in the payment amounts and identify which customer had made this payment.

Write a query that prepares the dataset needed to run this investigations.



```
1  SELECT
2      customerNumber,
3      amount
4  FROM classicmodels.payments
5  ORDER BY amount
```



### Exercise 3

In the farmers\_market database, it is required to study the price of products, rounded to the closet dollar, at each vendor along with the quantity available.

Write a query that prepares the dataset needed to conduct this study.



```
1  SELECT
2      product_id,
3      vendor_id,
4      quantity,
5      round(original_price) as rounded_price
6  FROM farmers_market.vendor_inventory
```

## Exercise 4

In the classicmodels database, it is required to provide the following list.

Customer_name	Full_address



Write a query that prepares the dataset needed to provide this list.

```
1 • SELECT
2     customerName,
3     concat(addressLine1, ",", addressLine2, ",", city, ",", state, ",", postalCode, ",", country ) AS Full_address
4 FROM classicmodels.customers
```

## Exercise 5

Write the query used to retrieve the following dataset needed from the sakila database

rental_id	customer_id	staff_id	rental_date
15777	130	2	2005-08-23 13:29:08
15574	130	2	2005-08-23 05:29:32
14111	130	2	2005-08-21 00:59:01
11811	130	2	2005-08-17 11:59:18
9637	130	2	2005-07-31 05:18:54
4485	130	2	2005-07-08 01:07:54
2535	130	2	2005-06-19 01:39:04
2292	130	2	2005-06-18 07:37:48
2163	130	2	2005-06-17 23:46:16
1864	130	2	2005-06-17 01:39:47
746	130	2	2005-05-29 09:25:10

```
1 • SELECT
2     rental_id,
3     customer_id,
4     staff_id,
5     rental_date
6 FROM sakila.rental
7 WHERE customer_id = 130 and staff_id = 2
8 ORDER BY rental_date DESC
```