# Relational Databases and SQL Course 2020-2021

Home Exercise 2

## Setup for the exercise

1. Open MySQL Workbench and connect to your local MySQL Server instance.
2. In the Query window, create a new database like so:  
     
   CREATE DATABASE exercise2;
3. Refresh Navigator window to make sure the new database appears there.
4. In the Query window, create a new table called ‘left’:  
     
   USE exercise2;

CREATE TABLE `left` (

name VARCHAR(20)

);

1. Notice that because the word “left” is a reserved word in MySQL then we always have to put ` around the table name!
2. INSERT data into the table using these commands:  
     
   INSERT INTO `left` (`name`) VALUES ('Apple');

INSERT INTO `left` (`name`) VALUES ('Banana');

INSERT INTO `left` (`name`) VALUES ('Cherry');

1. Now create a new table called `right`:

CREATE TABLE `right` (

name VARCHAR(20)

);

1. Finally, insert data into the table:  
     
   INSERT INTO `right` (`name`) VALUES ('Banana');

INSERT INTO `right` (`name`) VALUES ('Cherry');

INSERT INTO `right` (`name`) VALUES ('Durian');

## Questions for Submission

You are going to practice various types of joins between the two tables. Joins are typically made based on primary keys but, because this is just an exercise, the tables don’t have primary keys defined. In the questions below, join the tables based on the name field where appropriate.

1. Write a SELECT \* query with an INNER JOIN between the `left` table and the `right` table.
2. Submit your query
3. How many rows are in the query’s output?
4. Which fruits are listed in the query’s output?
5. Write a SELECT \* query with a LEFT JOIN between the `left` table and the `right` table.
6. Submit your query
7. How many rows are in the query’s output?
8. Which fruits are listed in the query’s output?
9. Write a SELECT \* query that performs an OUTER JOIN between the `left` table and the `right` table.
10. Submit your query
11. How many rows are in the query’s output?
12. Which fruits are listed in the query’s output?
13. Write a SELECT \* query with a CROSS JOIN between the `left` table and the `right` table.
14. Submit your query
15. How many rows are in the query’s output?
16. Which fruits are listed in the query’s output?

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