

DAD 220 Module Two Lab Template

Joseph Cassello Jr.

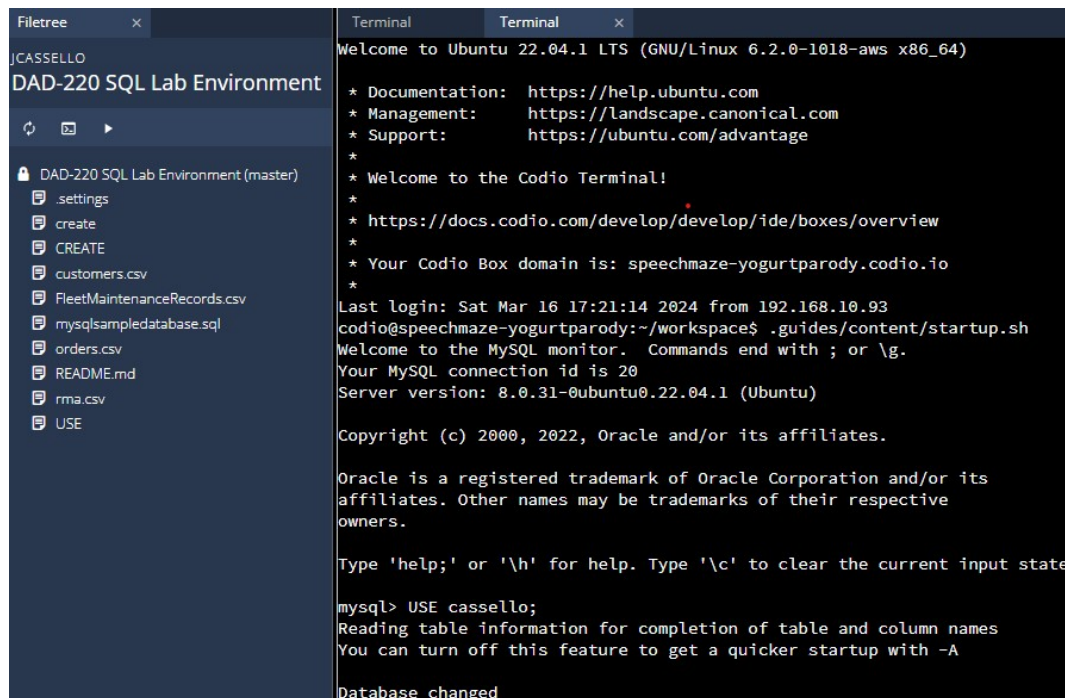
Overview

To complete this lab, go to your Codio virtual lab environment and start a new terminal session. Once there, perform the steps below to complete this activity. Manually enter any commands you are asked to write.

At the end of each step in the activity, replace the bracketed text in this template with a screenshot, brief explanation, or both as indicated. Size each screenshot and its explanation to fit about one-quarter of the page with the description written below the screenshot. Review the Template Screenshot Example linked in the guidelines and rubric for this assignment to see an example of how screenshots for your assignment should look.

Create and Describe Database Tables

- Connect to the database you created and named in Module One (for example, Jetson). Type after the prompt `mysql>`. Validate your work with a screenshot.
 - `USE (table you created);`
 - Example: `mysql> USE Jetson;`



```
Filetree x
JCASSELLO
DAD-220 SQL Lab Environment

DAD-220 SQL Lab Environment (master)
  .settings
  create
  CREATE
  customers.csv
  FleetMaintenanceRecords.csv
  mysqlsampledatabase.sql
  orders.csv
  README.md
  rma.csv
  USE

Terminal x
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 6.2.0-1018-aws x86_64)
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage
*
* Welcome to the Codio Terminal!
*
* https://docs.codio.com/develop/develop/ide/boxes/overview
*
* Your Codio Box domain is: speechmaze-yogurtparody.codio.io
*
Last login: Sat Mar 16 17:21:14 2024 from 192.168.10.93
codio@speechmaze-yogurtparody:~/workspace$ .guides/content/startup.sh
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.31-0ubuntu0.22.04.1 (Ubuntu)

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owners.

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

mysql> USE cassello;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
```

Here I implemented the `mysql> use cassello;` command

- Create the Employee table using the SQL statement shown here. Press Enter after each line. Validate your work with a screenshot.

```
CREATE TABLE Employee (
Employee_ID SMALLINT,
First_Name VARCHAR(40),
Last_Name VARCHAR(60),
Department_ID SMALLINT,
Classification VARCHAR(10),
Status VARCHAR(10),
Salary DECIMAL(7,2));
```

```
* Welcome to the Codio Terminal!
*
* https://docs.codio.com/develop/develop/ide/boxes/overview
*
* Your Codio Box domain is: speechmaze-yogurtparody.codio.io
*
Last login: Sat Mar 16 17:21:14 2024 from 192.168.10.93
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mysql> USE cassello;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

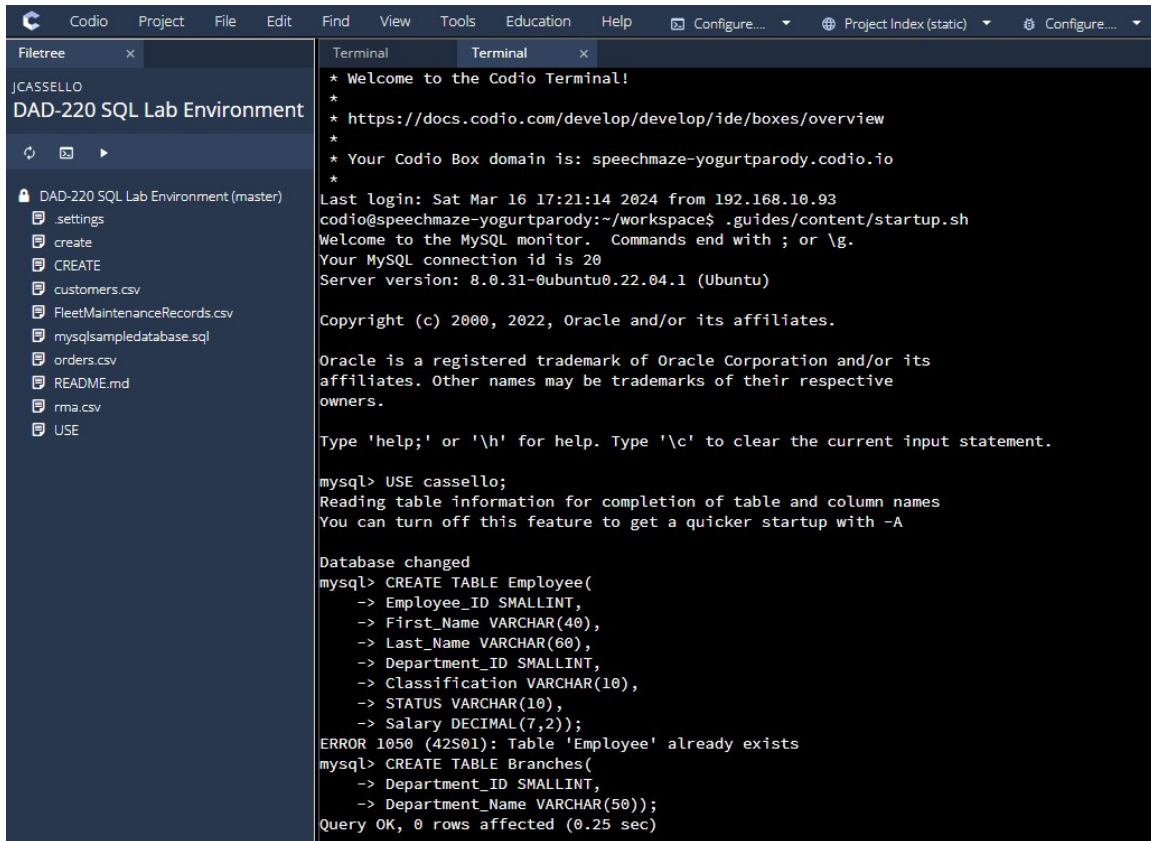
Database changed
mysql> CREATE TABLE Employee(
-> Employee_ID SMALLINT,
-> First_Name VARCHAR(40),
-> Last_Name VARCHAR(60),
-> Department_ID SMALLINT,
-> Classification VARCHAR(10),
-> STATUS VARCHAR(10),
-> Salary DECIMAL(7,2));
ERROR 1050 (42S01): Table 'Employee' already exists
mysql> CREATE TABLE Branches(
-> Department_ID SMALLINT,
-> Department_Name VARCHAR(50));
Query OK, 0 rows affected (0.25 sec)

mysql> DESCRIBE Employee;
```

Here I created the Employee table

- Create the Branches table. Fill in the missing characters or punctuation in the incomplete statement shown below to complete this action. Validate your work with a screenshot.

```
CREATE Branches (
Department_ID SMALLINT,
Department_Name );
```



The screenshot shows the Codio IDE interface. On the left is a file explorer for the 'DAD-220 SQL Lab Environment' project, listing files like .settings, create, CREATE, customers.csv, FleetMaintenanceRecords.csv, mysqlsampledatabase.sql, orders.csv, README.md, rma.csv, and USE. The main terminal window displays the following output:

```
* Welcome to the Codio Terminal!
*
* https://docs.codio.com/develop/develop/ide/boxes/overview
*
* Your Codio Box domain is: speechmaze-yogurtparody.codio.io
*
Last login: Sat Mar 16 17:21:14 2024 from 192.168.10.93
codio@speechmaze-yogurtparody:~/workspace$ .guides/content/startup.sh
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.31-0ubuntu0.22.04.1 (Ubuntu)

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owners.

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

mysql> USE cassello;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> CREATE TABLE Employee(
  -> Employee_ID SMALLINT,
  -> First_Name VARCHAR(40),
  -> Last_Name VARCHAR(60),
  -> Department_ID SMALLINT,
  -> Classification VARCHAR(10),
  -> STATUS VARCHAR(10),
  -> Salary DECIMAL(7,2));
ERROR 1050 (42S01): Table 'Employee' already exists
mysql> CREATE TABLE Branches(
  -> Department_ID SMALLINT,
  -> Department_Name VARCHAR(50));
Query OK, 0 rows affected (0.25 sec)
```

Here I created the Branches Table

- After creating the tables, use the correct commands to describe the two tables. You'll be given commands to describe one of the tables. You must complete the same action for the second table on your own. Validate your work with a screenshot.
- DESCRIBE Employee;
- Write the correct command to describe the Branches table.

The screenshot shows a terminal window in the Codio IDE. The left sidebar displays the file tree for a project named 'DAD-220 SQL Lab Environment'. The terminal window shows the following commands and output:

```

mysql> USE cassello;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> CREATE TABLE Employee(
  -> Employee_ID SMALLINT,
  -> First_Name VARCHAR(40),
  -> Last_Name VARCHAR(60),
  -> Department_ID SMALLINT,
  -> Classification VARCHAR(10),
  -> STATUS VARCHAR(10),
  -> Salary DECIMAL(7,2));
ERROR 1050 (42S01): Table 'Employee' already exists
mysql> CREATE TABLE Branches(
  -> Department_ID SMALLINT,
  -> Department_Name VARCHAR(50));
Query OK, 0 rows affected (0.25 sec)

mysql> DESCRIBE Employee;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Employee_ID    | smallint      | YES  |     | NULL    |       |
| First_Name     | varchar(40)   | YES  |     | NULL    |       |
| Last_Name      | varchar(60)   | YES  |     | NULL    |       |
| Department_ID  | smallint      | YES  |     | NULL    |       |
| Classification  | varchar(10)   | YES  |     | NULL    |       |
| STATUS         | varchar(10)   | YES  |     | NULL    |       |
| Salary         | decimal(7,2)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> DESCRIBE Branches;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Department_ID  | smallint      | YES  |     | NULL    |       |
| Department_Name | varchar(50)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

```

Here I described the Employee and Branch table

- Insert the following records into the Employee table (with support). Each line going from left to right is a record. Each line going from top to bottom is a column. Validate your work with a screenshot.
 - **INSERT INTO Employee VALUES**
 (100, 'John', 'Smith', 1, 'Exempt', 'Full-Time', 90000),
 (101, 'Mary', 'Jones', 2, 'Non-Exempt', 'Part-Time', 35000),
 (102, 'Mary', 'Williams', 3, 'Exempt', 'Full-Time', 80000);
 - Type the command **SELECT* FROM Employee.**

```

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

mysql> USE cassello;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> CREATE TABLE Employee(
-> Employee_ID SMALLINT,
-> First_Name VARCHAR(40),
-> Last_Name VARCHAR(60),
-> Department_ID SMALLINT,
-> Classification VARCHAR(10),
-> STATUS VARCHAR(10),
-> Salary DECIMAL(7,2));
ERROR 1050 (42S01): Table 'Employee' already exists
mysql> CREATE TABLE Branches(
-> Department_ID SMALLINT,
-> Department_Name VARCHAR(50));
Query OK, 0 rows affected (0.25 sec)

mysql> DESCRIBE Employee;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Employee_ID    | smallint      | YES  |     | NULL    |       |
| First_Name     | varchar(40)   | YES  |     | NULL    |       |
| Last_Name      | varchar(60)   | YES  |     | NULL    |       |
| Department_ID  | smallint      | YES  |     | NULL    |       |
| Classification  | varchar(10)   | YES  |     | NULL    |       |
| STATUS         | varchar(10)   | YES  |     | NULL    |       |
| Salary         | decimal(7,2)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> DESCRIBE Branches;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Department_ID  | smallint      | YES  |     | NULL    |       |
| Department_Name | varchar(50)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> INSERT INTO Employee VALUES
-> (100,'John','Smith',1,'Exempt','Full-Time',90000),
-> (101,'Mary','Jones',2,'Non-Exempt','Part-Time',35000),
-> (102,'Mary','Williams',3,'Exempt','Full-Time',80000);
Query OK, 3 rows affected (0.05 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> SELECT*FROM Employee;
+-----+-----+-----+-----+-----+-----+-----+
| Employee_ID | First_Name | Last_Name | Department_ID | Classification | STATUS | Salary |
+-----+-----+-----+-----+-----+-----+-----+
| 100 | John | Smith | 1 | Exempt | Full-Time | 90000.00 |
| 101 | Mary | Jones | 2 | Non-Exempt | Part-Time | 35000.00 |
| 102 | Mary | Williams | 3 | Exempt | Full-Time | 80000.00 |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

Here I inserted Employee values

- Insert the following records into the Employee table for Gwen Johnson and Michael Jones by writing the correct SQL commands on your own (without support).
- Gwen Johnson: Employee ID = 103, DEPARTMENT_ID = 4, Classification = NULL, Status = Full-Time, Salary = 40000
- Michael Jones: Employee ID = 104, DEPARTMENT_ID = 4, Classification = Non-Exempt, Status = Full-Time, Salary = 90000
- Insert your name into the table to verify and prove your work.

(Your First and Last Name, or a nickname): Employee ID = 105,
DEPARTMENT_ID = 1, Classification = Non-Exempt, Status = Full-time, Salary =
(Choose a value between 50000 and 99000)

- Type the command `SELECT * FROM Employee;` and take a screenshot of it to validate this step.
- Insert records for a musician, athlete, or other famous character of your choice. Make sure to enter information for all of the fields listed in this table. The `Department_ID` must be a number between 1 and 4.
- Write the correct command to prove that you've successfully completed this step and validate it with a screenshot.

```

mysql> INSERT INTO Employee VALUES
  -> (103,'Gwen','Johnson',4,'Null','Full-Time',40000),
  -> (104,'Michael','Jones',4,'Non-Exempt','Full-Time',90000),
  -> (105,'Joey','Cassello',1,'Non-Exempt','Full-Time',99000);
Query OK, 3 rows affected (0.05 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> SELECT*FROM Employee;
+-----+-----+-----+-----+-----+-----+
| Employee_ID | First_Name | Last_Name | Department_ID | Classification | STATUS | Salary |
+-----+-----+-----+-----+-----+-----+
| 100 | John | Smith | 1 | Exempt | Full-Time | 90000.00 |
| 101 | Mary | Jones | 2 | Non-Exempt | Part-Time | 35000.00 |
| 102 | Mary | Williams | 3 | Exempt | Full-Time | 80000.00 |
| 103 | Gwen | Johnson | 4 | Null | Full-Time | 40000.00 |
| 104 | Michael | Jones | 4 | Non-Exempt | Full-Time | 90000.00 |
| 105 | Joey | Cassello | 1 | Non-Exempt | Full-Time | 99000.00 |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> INSERT INTO Employee VALUES
  -> (106,'Morgan','Freeman',3,'Full-Time',80000);
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> INSERT INTO Employee VALUES
  -> (106, 'Morgan','Freeman',3,'Exempt','Full-Time',80000);
Query OK, 1 row affected (0.07 sec)

mysql> SELECT*FROM Employee;
+-----+-----+-----+-----+-----+-----+
| Employee_ID | First_Name | Last_Name | Department_ID | Classification | STATUS | Salary |
+-----+-----+-----+-----+-----+-----+
| 100 | John | Smith | 1 | Exempt | Full-Time | 90000.00 |
| 101 | Mary | Jones | 2 | Non-Exempt | Part-Time | 35000.00 |
| 102 | Mary | Williams | 3 | Exempt | Full-Time | 80000.00 |
| 103 | Gwen | Johnson | 4 | Null | Full-Time | 40000.00 |
| 104 | Michael | Jones | 4 | Non-Exempt | Full-Time | 90000.00 |
| 105 | Joey | Cassello | 1 | Non-Exempt | Full-Time | 99000.00 |
| 106 | Morgan | Freeman | 3 | Exempt | Full-Time | 80000.00 |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

Here I inserted more records, including my name and Morgan Freeman

- Select the fields of last name, first name, and department id from the table. Validate your work with a screenshot.
- `SELECT First_Name, Last_Name, Employee_ID, Department_ID FROM Employee;`

```
C  Code  Project  File  Edit  Find  View  Tools  Education  Help  Configure...  ProjectIndex(Static)  Configure...

DAD-220 SQL Lab Environment

mysql> INSERT INTO Employee VALUES
-> (101,'Gwen','Johnson',4,'Null','Full-Time',40000),
-> (102,'Mary','Williams',3,'Exempt','Full-Time',80000),
-> (105,'Joey','Cassello',1,'Non-Exempt','Full-Time',90000);
Query OK, 3 rows affected (0.65 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT*FROM Employee;
+-----+-----+-----+-----+-----+-----+
| Employee_ID | First_Name | Last_Name | Department_ID | Classification | STATUS | Salary |
+-----+-----+-----+-----+-----+-----+
| 101 | Mary | Jones | 2 | Non-Exempt | Part-Time | 25000.00 |
| 102 | Mary | Williams | 3 | Exempt | Full-Time | 80000.00 |
| 103 | Gwen | Johnson | 4 | Null | Full-Time | 40000.00 |
| 104 | Michael | Jones | 4 | Non-Exempt | Full-Time | 90000.00 |
| 105 | Joey | Cassello | 1 | Non-Exempt | Full-Time | 90000.00 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.08 sec)

mysql> INSERT INTO Employee VALUES
-> (106,'Morgan','Freeman',3,'Full-Time',80000);
ERROR 1136 (21561): Column count doesn't match value count at row 1
mysql> INSERT INTO Employee VALUES
-> (106,'Morgan','Freeman',3,'Exempt','Full-Time',80000);
Query OK, 1 row affected (0.07 sec)

mysql> SELECT*FROM Employee;
+-----+-----+-----+-----+-----+-----+
| Employee_ID | First_Name | Last_Name | Department_ID | Classification | STATUS | Salary |
+-----+-----+-----+-----+-----+-----+
| 100 | John | Smith | 1 | Exempt | Full-Time | 90000.00 |
| 101 | Mary | Jones | 2 | Non-Exempt | Part-Time | 25000.00 |
| 102 | Mary | Williams | 3 | Exempt | Full-Time | 80000.00 |
| 103 | Gwen | Johnson | 4 | Null | Full-Time | 40000.00 |
| 104 | Michael | Jones | 4 | Non-Exempt | Full-Time | 90000.00 |
| 105 | Joey | Cassello | 1 | Non-Exempt | Full-Time | 90000.00 |
| 106 | Morgan | Freeman | 3 | Exempt | Full-Time | 80000.00 |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.08 sec)

mysql> SELECT First_Name, Last_Name, Employee_ID, Department_ID, FROM Employee;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'FROM Employee' at line 1
mysql> SELECT Joey, Cassello, 105, 1 FROM Employee;
ERROR 1064 (42022): Unknown column 'Joey' in 'field list'
mysql> Select First_Name, Last_Name, Employee_ID, Department_ID from Employee;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'Select First_Name, Last_Name, Employee_ID, Department_ID from Employee' at line 2
mysql> Select First_Name, Last_Name, Employee_ID, Department_ID from Employee;
+-----+-----+-----+-----+
| First_Name | Last_Name | Employee_ID | Department_ID |
+-----+-----+-----+-----+
| John | Smith | 100 | 1 |
| Mary | Jones | 101 | 2 |
| Mary | Williams | 102 | 3 |
| Gwen | Johnson | 103 | 4 |
| Michael | Jones | 104 | 4 |
| Joey | Cassello | 105 | 1 |
| Morgan | Freeman | 106 | 3 |
+-----+-----+-----+-----+
7 rows in set (0.08 sec)

mysql> 
```

Here I selected all columns from the table