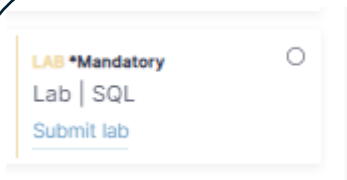


Daniel Moltó Salvador

Respecto a los ejercicios SQL LAB:

No me ha resultado complicados lo ejercicios iniciales.

A partir del ejercicio 6 he tenido que repasar conceptos y consultar diversa documentación. Los ‘join’ me han resultado algo confusos y no he conseguido realizar adecuadamente los dos últimos ejercicios adecuadamente.

Crear BBDD

Review the SQL Script to be Applied on the Database

Online DDL

Algorithm: Default Lock Type: Default

```
1   CREATE SCHEMA `lab_java_week3_monday` ;
2
```

Instructions

1. Normalize the following blog database and write the DDL scripts to create the database tables:

author	title	word count	views
Maria Charlotte	Best Paint Colors	814	14
Juan Perez	Small Space Decorating Tips	1146	221
Maria Charlotte	Hot Accessories	986	105
Maria Charlotte	Mixing Textures	765	22
Juan Perez	Kitchen Refresh	1242	307
Maria Charlotte	Homemade Art Hacks	1002	193
Gemma Alcocer	Refinishing Wood Floors	1571	7542

```sql
CREATE TABLE Authors (
ID INT AUTO_INCREMENT NOT NULL,
author_name VARCHAR(50) NOT NULL,
PRIMARY KEY (ID)
);

CREATE TABLE Posts (
ID INT AUTO_INCREMENT NOT NULL,
tittle VARCHAR(50) NOT NULL,
word_count INT NOT NULL,
authorID INT NOT NULL,
PRIMARY KEY (ID),
FOREIGN KEY (authorID) REFERENCES Authors(ID)
);
```

Ahora insertamos los registros primero en la tabla authors

```
-- Insert registers Tuples autogenerated
INSERT INTO Authors (author_name) VALUES
('Maria Charlotte'),
('Juan Perez'),
('Gemma Alcocer');
```

Después en la tabla posts ya que tiene una clave foránea apuntando a la tabla authors

```
INSERT INTO Posts (tittle, word_count, authorID) VALUES
('Best Paint Colors', 814, 1),
('Small Space Decorating Tips', 1146, 2),
('Hot Accessories', 986, 1),
('Mixing Textures', 765, 1),
('Kitchen Refresh', 1242, 2),
('Homemade Art Hacks', 1002, 1),
('Refinishing Wood Floors', 1571, 3);
```

Ahora verificamos el estado y contenido de las tablas.

```
1 • SELECT * FROM lab_java_week3_monday.authors;
```

esult Grid | Filter Rows: | Edit:

ID	author_name
1	Maria Charlotte
2	Juan Perez
3	Gemma Alcocer

```
1 • SELECT * FROM lab_java_week3_monday.posts;
```

esult Grid | Filter Rows: | Edit:

ID	tittle	word_count	authorID
1	Best Paint Colors	814	1
2	Small Space Decorating Tips	1146	2
3	Hot Accessories	986	1
4	Mixing Textures	765	1
5	Kitchen Refresh	1242	2
6	Homemade Art Hacks	1002	1
7	Refinishing Wood Floors	1571	3

Creo una nueva BBDD para el ejercicio 2

```
1    CREATE SCHEMA `lab_java_week3_monday_2` ;
```

2. Normalize the following airline database and write the DDL scripts to create the database tables:

Customer Name	Customer Status	Flight Number	Aircraft	Total Aircraft Seats	Flight Mileage	Total Customer Mileage
Agustine Riviera	Silver	DL143	Boeing 747	400	135	115235
Agustine Riviera	Silver	DL122	Airbus A330	236	4370	115235
Alaina Sepulvida	None	DL122	Airbus A330	236	4370	6008
Agustine Riviera	Silver	DL143	Boeing 747	400	135	115235
Tom Jones	Gold	DL122	Airbus A330	236	4370	205767
Tom Jones	Gold	DL53	Boeing 777	264	2078	205767
Agustine Riviera	Silver	DL143	Boeing 747	400	135	115235
Sam Rio	None	DL143	Boeing 747	400	135	2653
Agustine Riviera	Silver	DL143	Boeing 747	400	135	115235
Tom Jones	Gold	DL222	Boeing 777	264	1765	205767
Jessica James	Silver	DL143	Boeing 747	400	135	127656
Sam Rio	None	DL143	Boeing 747	400	135	2653
Ana Janco	Silver	DL222	Boeing 777	264	1765	136773
Jennifer Cortez	Gold	DL222	Boeing 777	264	1765	300582
Jessica James	Silver	DL122	Airbus A330	236	4370	127656
Sam Rio	None	DL37	Boeing 747	400	531	2653
Christian Janco	Silver	DL222	Boeing 777	264	1765	14642

```sql
CREATE TABLE Aircraft (
ID INT AUTO_INCREMENT NOT NULL,
aircraft_model VARCHAR(50) NOT NULL,
total_seats INT NOT NULL,

PRIMARY KEY (ID)
);

CREATE TABLE Flights (
ID INT AUTO_INCREMENT NOT NULL,
flight_number VARCHAR(20) NOT NULL,
flight_mileage INT NOT NULL,
aircraftID INT NOT NULL,

PRIMARY KEY (ID),
FOREIGN KEY (aircraftID) REFERENCES Aircraft(ID)
);

CREATE TABLE Customer_status (
ID INT AUTO_INCREMENT NOT NULL,
status VARCHAR(25),

PRIMARY KEY (ID)
);
```


```sql
CREATE TABLE Customers (
ID INT AUTO_INCREMENT NOT NULL,
customer_name VARCHAR(25) NOT NULL,
total_customer_mileage INT NOT NULL,
statusID INT NOT NULL,

PRIMARY KEY (ID),
FOREIGN KEY (statusID) REFERENCES Customer_status(ID)
);

CREATE TABLE Bookings (
ID INT AUTO_INCREMENT NOT NULL,
customerID INT NOT NULL,
flightID INT NOT NULL,

PRIMARY KEY (ID),
FOREIGN KEY (customerID) REFERENCES Customers(ID),
FOREIGN KEY (flightID) REFERENCES Flights(ID)
);
```

Inserción de Registros

```sql
INSERT INTO Customer_status (status)
VALUES
    ('Silver'),
    ('None'),
    ('Gold');
```

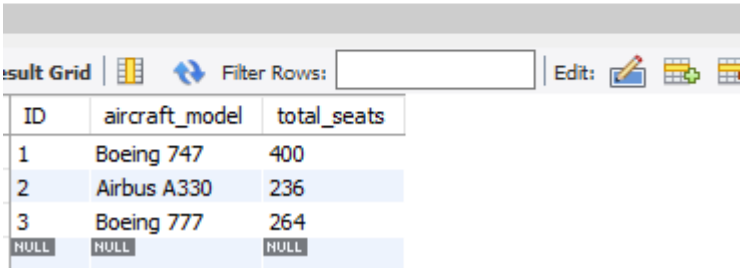
```sql
SELECT * FROM lab_java_week3_monday_2.customer_status;
```

Result Grid | Filter Rows: | Edit: | Export/I

ID	status
1	Silver
2	None
3	Gold
NULL	NULL

```
INSERT INTO Aircraft (aircraft_model, total_seats) VALUES
('Boeing 747', 400),
('Airbus A330', 236),
('Boeing 777', 264);
```

```
1 •  SELECT * FROM lab_java_week3_monday_2.aircraft
```

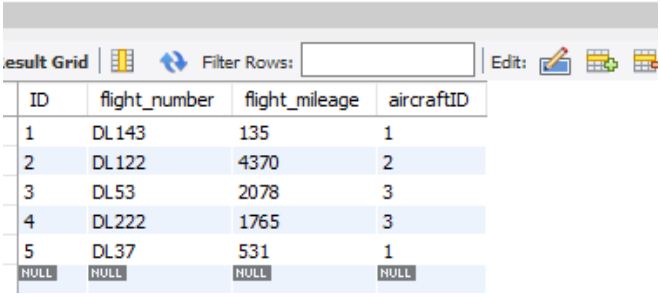


ID	aircraft_model	total_seats
1	Boeing 747	400
2	Airbus A330	236
3	Boeing 777	264
NULL	NULL	NULL

*Intención de probar el select dentro de una inserción.

```
INSERT INTO Flights (flight_number, flight_mileage, aircraftID)
VALUES
    ('DL143', 135, (SELECT ID FROM Aircraft WHERE aircraft_model = 'Boeing 747')),
    ('DL122', 4370, (SELECT ID FROM Aircraft WHERE aircraft_model = 'Airbus A330')),
    ('DL53', 2078, (SELECT ID FROM Aircraft WHERE aircraft_model = 'Boeing 777')),
    ('DL222', 1765, (SELECT ID FROM Aircraft WHERE aircraft_model = 'Boeing 777')),
    ('DL37', 531, (SELECT ID FROM Aircraft WHERE aircraft_model = 'Boeing 747'));
```

```
1 •  SELECT * FROM lab_java_week3_monday_2.flights;
```



ID	flight_number	flight_mileage	aircraftID
1	DL143	135	1
2	DL122	4370	2
3	DL53	2078	3
4	DL222	1765	3
5	DL37	531	1
NULL	NULL	NULL	NULL

```sql
INSERT INTO Customers (customer_name,total_customer_mileage, statusID) VALUES
('Agustine Riviera',115235, 1),    -- Silver
('Alaina Sepulvida',6008, 3),    -- None
('Tom Jones',205767, 2),          -- Gold
('Sam Rio',2653, 3),             -- None
('Jessica James',127656, 1),      -- Silver
('Ana Janco',136773, 1),          -- Silver
('Jennifer Cortez',300582, 2),    -- Gold
('Christian Janco', 14642, 1);    -- Silver
```

```sql
1 •    SELECT * FROM lab_java_week3_monday_2.customers;
```

Result Grid | Filter Rows: | Edit:

ID	customer_name	total_customer_mileage	statusID
1	Agustine Riviera	115235	1
2	Alaina Sepulvida	6008	3
3	Tom Jones	205767	2
4	Sam Rio	2653	3
5	Jessica James	127656	1
6	Ana Janco	136773	1
7	Jennifer Cortez	300582	2
8	Christian Janco	14642	1
NULL	NULL	NULL	NULL

```sql
INSERT INTO Bookings (customerID, flightID) VALUES
(1, 1), -- Agustine Riviera, DL143
(1, 2), -- Agustine Riviera, DL122
(2, 2), -- Alaina Sepulvida, DL122
(1, 1), -- Agustine Riviera, DL143
(3, 2), -- Tom Jones, DL122
(3, 3), -- Tom Jones, DL53
(1, 1), -- Agustine Riviera, DL143
(4, 1), -- Sam Rio, DL143
(1, 1), -- Agustine Riviera, DL143
(3, 4), -- Tom Jones, DL222
(5, 1), -- Jessica James, DL143
(4, 1), -- Sam Rio, DL143
(6, 4), -- Ana Janco, DL222
(7, 4), -- Jennifer Cortez, DL222
(5, 2), -- Jessica James, DL122
(4, 5), -- Sam Rio, DL37
(8, 4); -- Christian Janco, DL222
```

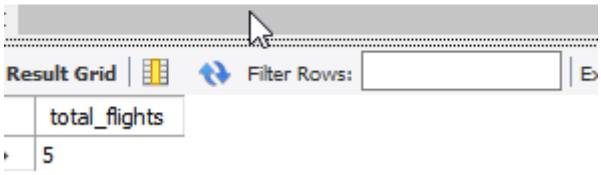
```sql
SELECT * FROM lab_java_week3_monday_2.bookings;
```

esult Grid | Filter Rows: | Edit:

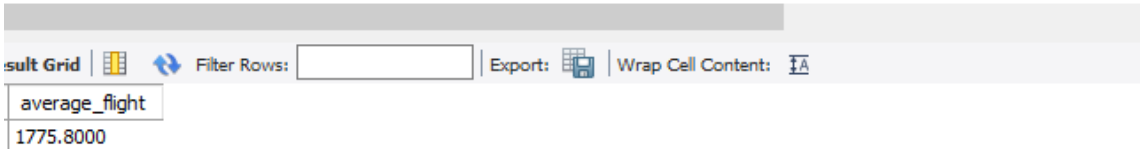
ID	customerID	flightID
1	1	1
2	1	2
3	2	2
4	1	1
5	3	2
6	3	3
7	1	1
8	4	1
9	1	1
10	3	4
11	5	1
12	4	1
13	6	4
14	7	4
15	5	2
16	4	5
17	8	4
NULL	NULL	NULL

3. In the Airline database write the SQL script to get the total number of flights in the database.

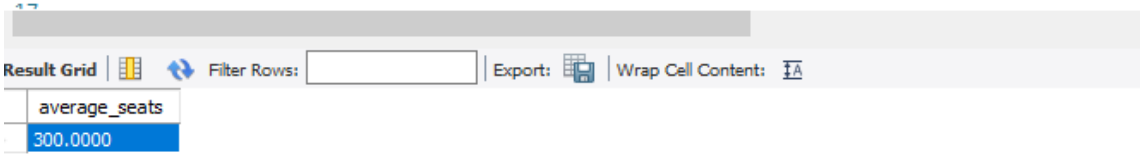
```
1
2 •   SELECT COUNT(*) AS total_flights
3     FROM Flights;
```




```
7     -- 4.In the Airline database write the SQL script to get the average flight distance.
8 •   SELECT AVG (flight_mileage) as average_flight FROM flights
```




```
13    -- 5. In the Airline database write the SQL script to get the average number of seats.
14 •  SELECT AVG(total_seats) AS average_seats
15    FROM Aircraft;
16
```



```sql
-- 6. In the Airline database write the SQL script to get
-- the average number of miles flown by customers grouped by status
SELECT
    cs.status,
    AVG(c.total_customer_mileage) AS average_miles
FROM Customers c
JOIN Customer_status cs ON c.statusID = cs.ID
GROUP BY cs.status;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

status	average_miles
Silver	98576.5000
None	253174.5000
Gold	4330.5000

```sql
-- 7. In the Airline database write the SQL script to get the maximum
-- number of miles flown by customers grouped by status.
SELECT
    cs.status,
    MAX(c.total_customer_mileage) AS max_miles_flown
FROM Customers c
JOIN Customer_status cs ON c.statusID = cs.ID
GROUP BY cs.status;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

status	max_miles_flown
Silver	136773
None	300582
Gold	6008

```sql
-- 8. In the Airline database write the SQL script to get
--  the total number of aircraft with a name containing Boeing.
SELECT COUNT(*) AS boeing
FROM Aircraft
WHERE aircraft_model LIKE '%Boeing%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

boeing
2

```
3      -- 9. In the Airline database write the SQL script to find all
4      -- flights with a distance between 300 and 2000 miles.
5 •    SELECT *
6      FROM Flights
7      WHERE flight_mileage BETWEEN 300 AND 2000;
8
```

ult Grid | Filter Rows: | Edit: | Export/Import:

ID	flight_number	flight_mileage	aircraftID
4	DL222	1765	3
5	DL37	531	1
NULL	NULL	NULL	NULL