Database Design - FlyAway

Create DB and tables
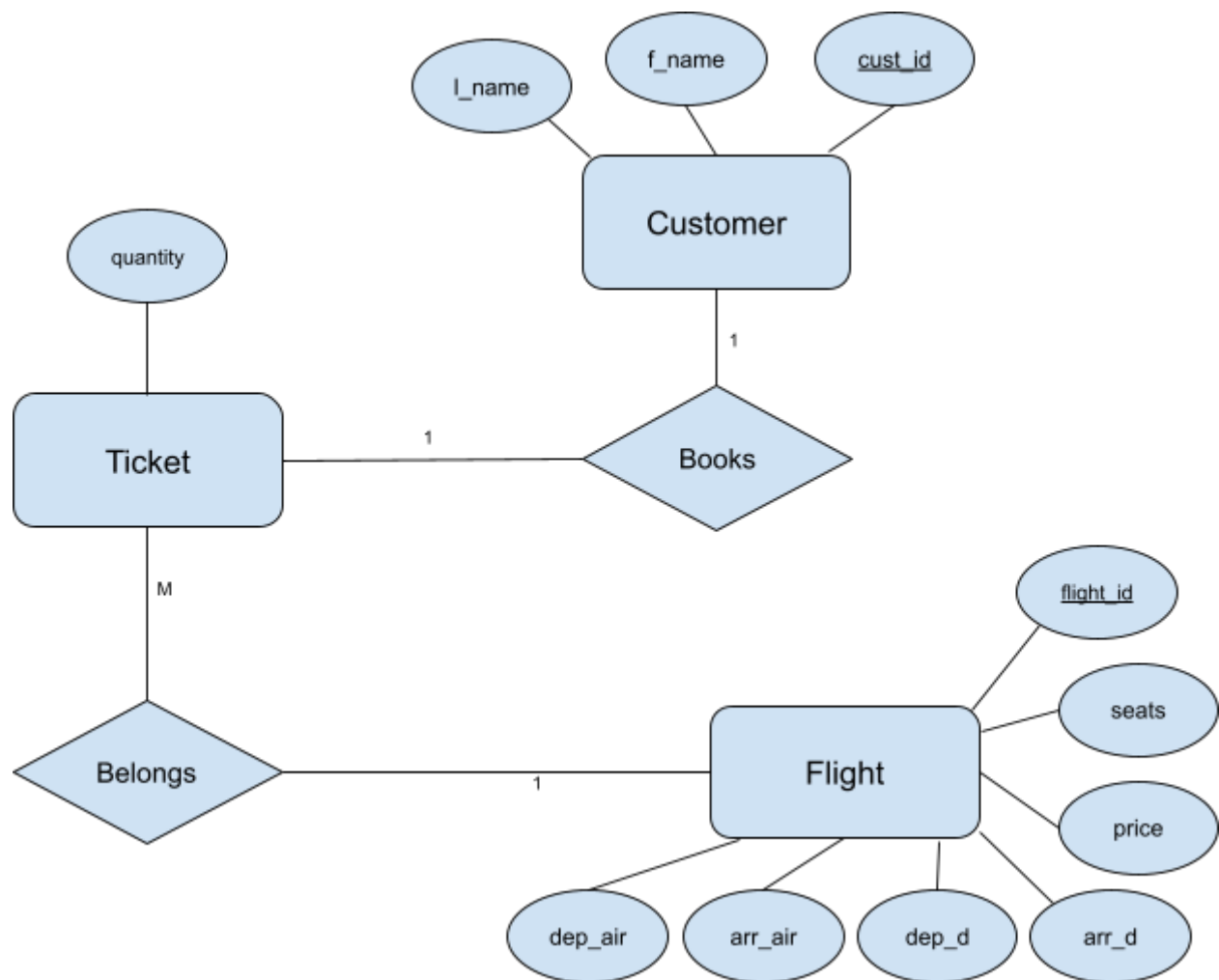
```sql
DROP DATABASE IF EXISTS fly_away;
CREATE DATABASE fly_away;
USE fly_away;


CREATE TABLE Customer(
customer_id INTEGER NOT NULL AUTO_INCREMENT,
first_name VARCHAR (50) NOT NULL,
last_name VARCHAR (50) NOT NULL,
PRIMARY KEY (customer_id)
);


CREATE TABLE Flight(
flight_id INTEGER,
dep_airport VARCHAR (3) NOT NULL,
arr_airport VARCHAR (3) NOT NULL,
dep_time DATETIME NOT NULL,
arr_time DATETIME NOT NULL,
available_seats INTEGER NOT NULL,
price INTEGER NOT NULL,
PRIMARY KEY (flight_id)
);


CREATE TABLE Ticket(
customer_id INTEGER,
flight_id INTEGER,
quantity INTEGER NOT NULL,
PRIMARY KEY (customer_id, flight_id),
FOREIGN KEY (customer_id) REFERENCES Customer (customer_id) ON DELETE CASCADE,
FOREIGN KEY (flight_id) REFERENCES Flight (flight_id) ON DELETE CASCADE
);
```

Entity Relationship Diagram

MySQL showing tables screenshots

Using fly_away database and show all tables

```
mysql> use fly_away;
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> show tables;
+-------------------+
| Tables_in_fly_away |
+-------------------+
| Customer          |
| Flight            |
| Ticket            |
+-------------------+
3 rows in set (0.00 sec)
```

Describing the table Customer

```
mysql> describe Customer;
+-------------+-------------+------+-----+---------+----------------+
| Field       | Type        | Null | Key | Default | Extra          |
+-------------+-------------+------+-----+---------+----------------+
| customer_id | int         | NO   | PRI | NULL    | auto_increment |
| first_name  | varchar(50) | NO   |     | NULL    |                |
| last_name   | varchar(50) | NO   |     | NULL    |                |
+-------------+-------------+------+-----+---------+----------------+
3 rows in set (0.03 sec)
```

Describing the table Flight

```
mysql> describe Flight;
+-----------------+------------+------+-----+---------+-------+
| Field           | Type       | Null | Key | Default | Extra |
+-----------------+------------+------+-----+---------+-------+
| flight_id       | int        | NO   | PRI | NULL    |       |
| dep_airport     | varchar(3) | NO   |     | NULL    |       |
| arr_airport     | varchar(3) | NO   |     | NULL    |       |
| dep_time        | datetime   | NO   |     | NULL    |       |
| arr_time        | datetime   | NO   |     | NULL    |       |
| available_seats | int        | NO   |     | NULL    |       |
| price           | int        | NO   |     | NULL    |       |
+-----------------+------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

Describing the table Ticket

```
mysql> describe Ticket;
+-------------+------+------+-----+---------+----------------+
| Field       | Type | Null | Key | Default | Extra          |
+-------------+------+------+-----+---------+----------------+
| customer_id | int  | NO   | PRI | NULL    | auto_increment |
| flight_id   | int  | NO   | PRI | NULL    |                |
| quantity    | int  | NO   |     | NULL    |                |
+-------------+------+------+-----+---------+----------------+
3 rows in set (0.00 sec)
```

Showing all the available flights added to the database

```
mysql> select * from Flight;
+-----------+------------+------------+---------------------+---------------------+-----------------+-------+
| flight_id | dep_airport | arr_airport | dep_time            | arr_time            | available_seats | price |
+-----------+------------+------------+---------------------+---------------------+-----------------+-------+
|       101 | SFO        | LAX        | 2021-12-31 17:30:00 | 2021-12-31 18:25:00 |             240 |   100 |
|       102 | JFK        | LAX        | 2021-12-31 12:30:00 | 2021-12-31 15:45:00 |             320 |   400 |
|       103 | LAX        | SFO        | 2021-12-31 20:10:00 | 2021-12-31 21:05:00 |             160 |   120 |
+-----------+------------+------------+---------------------+---------------------+-----------------+-------+
3 rows in set (0.00 sec)
```