

Modelo de Estrella

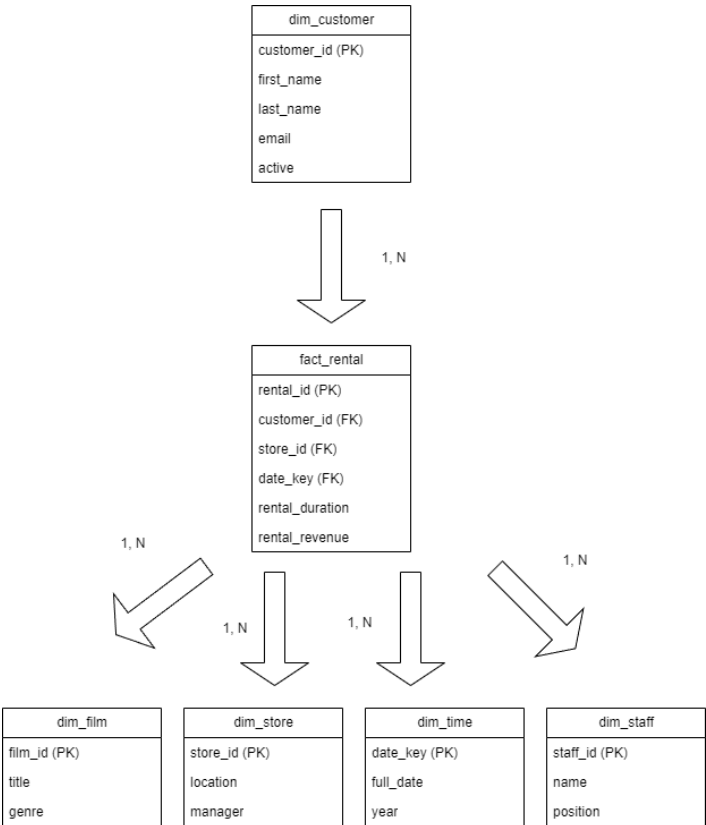


Tabla de hechos fact_rental:

Servirá para analizar los alquileres en el videoclub. Por ejemplo, la cantidad de alquileres que se realizaron en un período de tiempo, conocer las películas más alquiladas y los clientes que alquilan con más frecuencia.

fact_rental
rental_id (PK)
customer_id (FK)
store_id (FK)
date_key (FK)
rental_duration
rental_revenue

Tabla de dimensiones dim_customer:

Para almacenar los datos sobre los clientes del videoclub

dim_customer
customer_id (PK)
first_name
last_name
email
active

Tabla de dimensiones dim_film:

Para dar detalles sobre las películas alquiladas

dim_film
film_id (PK)
title
genre

Tabla de dimensiones dim_store:

Para analizar los alquileres en función de la ubicación del negocio.

dim_store
store_id (PK)
location
manager

Tabla de dimensiones dim_time:

Para facilitar el análisis temporal de los alquileres y los pagos

dim_time
date_key (PK)
full_date
year

Tabla de dimensiones dim_staff:

Para analizar el rendimiento de los empleados en las tiendas

dim_staff
staff_id (PK)
name
position

Creación de la tabla fact_rental

```
mysql> CREATE TABLE fact_rental ( rental_id INT PRIMARY KEY, customer_id INT, film_id INT, store_id INT, date_key INT, rental_revenue DECIMAL(10,2),
-> FOREIGN KEY (customer_id) REFERENCES dim_customer(customer_id),
-> FOREIGN KEY (film_id) REFERENCES dim_film(film_id),
-> FOREIGN KEY (store_id) REFERENCES dim_store(store_id),
-> FOREIGN KEY (date_key) REFERENCES dim_time(date_key));
Query OK, 0 rows affected (0,02 sec)

mysql> DESC fact_rental;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| rental_id  | int       | NO   | PRI | NULL    |       |
| customer_id | int       | YES  | MUL | NULL    |       |
| film_id    | int       | YES  | MUL | NULL    |       |
| store_id   | int       | YES  | MUL | NULL    |       |
| date_key   | int       | YES  | MUL | NULL    |       |
| rental_revenue | decimal(10,2) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0,00 sec)
```

Poblar la tabla fact_rental

```
mysql> INSERT INTO fact_rental (rental_id, customer_id, film_id, store_id, date_key, rental_revenue)
-> SELECT
-> r.rental_id,
-> r.customer_id,
-> i.film_id,
-> i.store_id,
-> DATE_FORMAT(r.rental_date, '%Y%m%d') AS date_key,
-> COALESCE(SUM(p.amount), 0) AS rental_revenue
-> FROM sakila.rental r
-> JOIN sakila.inventory i ON r.inventory_id = i.inventory_id
-> JOIN sakila.payment p ON r.rental_id = p.rental_id
-> GROUP BY r.rental_id, r.customer_id, i.film_id, i.store_id, date_key;
Query OK, 16044 rows affected (0,34 sec)
Records: 16044 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM fact_rental LIMIT 10;
+-----+-----+-----+-----+-----+-----+
| rental_id | customer_id | film_id | store_id | date_key | rental_revenue |
+-----+-----+-----+-----+-----+-----+
| 1         | 130         | 80      | 1        | 20050524 | 2.99           |
| 2         | 459         | 333     | 2        | 20050524 | 2.99           |
| 3         | 408         | 373     | 2        | 20050524 | 3.99           |
| 4         | 333         | 535     | 1        | 20050524 | 4.99           |
| 5         | 222         | 450     | 2        | 20050524 | 6.99           |
| 6         | 549         | 613     | 1        | 20050524 | 0.99           |
| 7         | 269         | 870     | 2        | 20050524 | 1.99           |
| 8         | 239         | 510     | 1        | 20050524 | 4.99           |
| 9         | 126         | 565     | 1        | 20050525 | 4.99           |
| 10        | 399         | 396     | 2        | 20050525 | 5.99           |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0,00 sec)
```

Creación de la tabla dim_time

```
mysql> CREATE TABLE dim_time ( date_key INT PRIMARY KEY, full_date DATE, year INT);
Query OK, 0 rows affected (0,01 sec)

mysql> DESC dim_time;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| date_key   | int       | NO   | PRI | NULL    |       |
| full_date  | date      | YES  |     | NULL    |       |
| year       | int       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
```

Poblar la tabla dim_time

```
mysql> INSERT IGNORE INTO dim_time (date_key, full_date, year)
-> SELECT DISTINCT
-> DATE_FORMAT(r.rental_date, '%Y%m%d') AS date_key,
-> r.rental_date AS full_date,
-> YEAR(r.rental_date) AS year
-> FROM sakila.rental r;
Query OK, 41 rows affected, 31588 warnings (0,06 sec)
Records: 15815 Duplicates: 15774 Warnings: 31588

mysql> SELECT * FROM dim_time
-> ;
+-----+-----+-----+
| date_key | full_date | year |
+-----+-----+-----+
| 20050524 | 2005-05-24 | 2005 |
| 20050525 | 2005-05-25 | 2005 |
| 20050526 | 2005-05-26 | 2005 |
| 20050527 | 2005-05-27 | 2005 |
| 20050528 | 2005-05-28 | 2005 |
| 20050529 | 2005-05-29 | 2005 |
| 20050530 | 2005-05-30 | 2005 |
| 20050531 | 2005-05-31 | 2005 |
| 20050614 | 2005-06-14 | 2005 |
| 20050615 | 2005-06-15 | 2005 |
```

Creación de la tabla dim_film

```
mysql> CREATE TABLE dim_film ( film_id INT PRIMARY KEY, title VARCHAR(40), genre VARCHAR(40));
Query OK, 0 rows affected (0,01 sec)

mysql> DESC dim_film;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| film_id | int       | NO   | PRI | NULL    |       |
| title   | varchar(40) | YES  |     | NULL    |       |
| genre   | varchar(40) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0,00 sec)
```

Poblar la tabla dim_film

```
mysql> INSERT INTO dim_film (film_id, title, genre)
-> SELECT f.film_id, f.title, c.name AS genre
-> FROM sakila.film f
-> JOIN sakila.film_category fc ON f.film_id = fc.film_id
-> JOIN sakila.category c ON fc.category_id = c.category_id;
Query OK, 1000 rows affected (0,02 sec)
Records: 1000 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM dim_film
-> ;
+-----+-----+-----+
| film_id | title           | genre      |
+-----+-----+-----+
| 1 | ACADEMY DINOSAUR | Documentary |
| 2 | ACE GOLFINGER    | Horror     |
| 3 | ADAPTATION HOLES | Documentary |
| 4 | AFFAIR PREJUDICE | Horror     |
| 5 | AFRICAN EGG      | Family     |
| 6 | AGENT TRUMAN     | Foreign    |
| 7 | AIRPLANE SIERRA  | Comedy     |
| 8 | AIRPORT POLLOCK  | Horror     |
| 9 | ALABAMA DEVIL    | Horror     |
| 10 | ALADDIN CALENDAR | Sports     |
```

Creación de la tabla dim_store

```
mysql> CREATE TABLE dim_store ( store_id INT PRIMARY KEY, location VARCHAR(40), manager VARCHAR(40));
Query OK, 0 rows affected (0,01 sec)

mysql> DESC dim_store;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| store_id | int          | NO   | PRI | NULL    |       |
| location | varchar(40)  | YES  |     | NULL    |       |
| manager  | varchar(40)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0,00 sec)
```

Poblar la tabla dim_store

```
mysql> INSERT INTO dim_store (store_id, location, manager)
-> SELECT
-> s.store_id,
-> CONCAT(a.address, ', ', c.city) AS location,
-> CONCAT(st.first_name, ' ', st.last_name) AS manager
-> FROM sakila.store s
-> JOIN sakila.address a ON s.address_id = a.address_id
-> JOIN sakila.city c ON a.city_id = c.city_id
-> JOIN sakila.staff st ON s.manager_staff_id = st.staff_id;
Query OK, 2 rows affected (0,04 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM dim_store;
+-----+-----+-----+
| store_id | location                                | manager      |
+-----+-----+-----+
| 1        | 47 MySakila Drive, Lethbridge          | Mike Hillyer |
| 2        | 28 MySQL Boulevard, Woodridge         | Jon Stephens  |
+-----+-----+-----+
2 rows in set (0,00 sec)
```

Creación de la tabla dim_staff

```
mysql> CREATE TABLE dim_staff ( staff_id INT PRIMARY KEY, name VARCHAR(40), position VARCHAR(40));
Query OK, 0 rows affected (0,01 sec)

mysql> DESC dim_staff;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| staff_id | int          | NO   | PRI | NULL    |       |
| name     | varchar(40)  | YES  |     | NULL    |       |
| position | varchar(40)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0,00 sec)
```


Poblar la tabla dim_staff

```
mysql> INSERT INTO dim_staff (staff_id, name, position)
-> SELECT
-> staff_id, CONCAT(first_name, ' ', last_name) AS name,
-> 'Employee' AS position
-> FROM sakila.staff;
Query OK, 2 rows affected (0,01 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM dim_staff;
+-----+-----+-----+
| staff_id | name          | position |
+-----+-----+-----+
| 1        | Mike Hillyer  | Employee |
| 2        | Jon Stephens  | Employee |
+-----+-----+-----+
2 rows in set (0,00 sec)
```

Creación de la tabla dim_customer

```
mysql> CREATE TABLE dim_customer ( customer_id INT PRIMARY KEY, first_name VARCHAR(40), last_name VARCHAR(40), email VARCHAR(40), active BOOLEAN);
Query OK, 0 rows affected (0,01 sec)

mysql> DESC dim_customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| customer_id | int          | NO   | PRI | NULL    |       |
| first_name  | varchar(40)  | YES  |     | NULL    |       |
| last_name   | varchar(40)  | YES  |     | NULL    |       |
| email       | varchar(40)  | YES  |     | NULL    |       |
| active      | tinyint(1)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0,00 sec)
```

Poblar la tabla dim_customer

```
mysql> INSERT INTO dim_customer (customer_id, first_name, last_name, email, active)
-> SELECT customer_id, first_name, last_name, email, active FROM sakila.customer;
Query OK, 599 rows affected (0,03 sec)
Records: 599 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM dim_customer;
+-----+-----+-----+-----+-----+
| customer_id | first_name | last_name | email                                     | active |
+-----+-----+-----+-----+-----+
| 1           | MARY      | SMITH     | MARY.SMITH@sakilacustomer.org           | 1      |
| 2           | PATRICIA  | JOHNSON   | PATRICIA.JOHNSON@sakilacustomer.org     | 1      |
| 3           | LINDA     | WILLIAMS  | LINDA.WILLIAMS@sakilacustomer.org       | 1      |
| 4           | BARBARA   | JONES     | BARBARA.JONES@sakilacustomer.org        | 1      |
| 5           | ELIZABETH | BROWN     | ELIZABETH.BROWN@sakilacustomer.org      | 1      |
| 6           | JENNIFER  | DAVIS     | JENNIFER.DAVIS@sakilacustomer.org       | 1      |
| 7           | MARIA     | MILLER    | MARIA.MILLER@sakilacustomer.org         | 1      |
| 8           | SUSAN     | WILSON    | SUSAN.WILSON@sakilacustomer.org         | 1      |
| 9           | MARGARET  | MOORE     | MARGARET.MOORE@sakilacustomer.org       | 1      |
| 10          | DOROTHY   | TAYLOR    | DOROTHY.TAYLOR@sakilacustomer.org       | 1      |
+-----+-----+-----+-----+-----+
```