***Tabla original***

***0NF***

**Theater**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | theater\_location | screen\_quantity | id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_slot | start\_time | end\_time | attendance | price\_charged | id\_screen | seats\_no | screen\_category | screen\_no | id\_schedule | week\_day |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id\_seat | seat\_pos | seat\_type | id\_ticket | movie\_date | purchase\_date | price |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_employee | emp\_name | emp\_address | emp\_position | emp\_phone | emp\_wage | id\_log | log\_description | log\_date | log\_time |

Dependencias funcionales:

Id\_theater -> { theater\_name, theater\_location, screen\_quantity }

Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies}

Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity} }

Id\_slot -> { start\_time, end\_time, attendance, price\_charged, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies} }

Id\_schedule -> { week\_day, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity} }, id\_slot -> { start\_time, end\_time, attendance, price\_charged, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies}} }

Id\_seat -> { seat\_pos, seat\_type, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity } } }

Id\_ticket -> { movie\_date, purchase\_date, id\_seat -> { seat\_pos, seat\_type, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity} } }, Id\_slot -> { start\_time, end\_time, attendance, price\_charged, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies} } }

Id\_employee -> {emp\_name, emp\_address, emp\_position -> { emp\_wage}, emp\_phone, Id\_theater -> { theater\_name, theater\_location, screen\_quantity } }

Id\_log -> log\_date, log\_time, log\_description, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies}, Id\_employee -> {emp\_name, emp\_address, emp\_position -> {emp\_wage}, emp\_phone, Id\_theater -> { theater\_name, theater\_location, screen\_quantity } }, Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity} } }

Id\_ticket, id\_seat -> {price}

***1NF***

**Theater**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | theater\_location | screen\_quantity | id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| theater\_zip | id\_slot | start\_time | end\_time | attendance | price\_charged | id\_screen | seats\_no | screen\_category | screen\_no | id\_schedule | week\_day |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| theater\_building\_no | id\_seat | seat\_pos | seat\_type | id\_ticket | movie\_date | purchase\_date | price |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_employee | id\_theater | emp\_Fname | emp\_Lname | emp\_street | emp\_housenum | emp\_zip | emp\_position | emp\_phone | emp\_wage | id\_log | id\_movie | id\_screen | log\_description | log\_date | log\_time |

**Movie\_slot**

|  |  |  |
| --- | --- | --- |
| Id\_movie\_slot | id\_slot | id\_movie |

Dependencias funcionales:

Id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity }

Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification }

Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } }

Id\_slot -> { start\_time, end\_time, attendance, price\_charged}

Id\_movie\_slot -> Id\_slot -> { start\_time, end\_time, attendance, price\_charged}, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies} }

Id\_schedule -> { week\_day, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } }, id\_slot -> { start\_time, end\_time, attendance, price\_charged, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies} } }

Id\_seat -> { seat\_pos, seat\_type, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } } }

Id\_ticket -> { movie\_date, purchase\_date, id\_seat -> { seat\_pos, seat\_type, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } } }, Id\_slot -> { start\_time, end\_time, attendance, price\_charged, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies} } }

Id\_employee -> {emp\_Fname, emp\_Lname, emp\_street, emp\_housenum, emp\_zip, emp\_position -> { emp\_wage}, emp\_phone, Id\_theater -> { theater\_name, theater\_location, screen\_quantity } }

Id\_log -> log\_date, log\_time, log\_description, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies}, Id\_employee -> {emp\_Fname, emp\_Lname, emp\_street, emp\_housenum, emp\_zip, emp\_position -> { emp\_wage}, emp\_phone, Id\_theater -> { theater\_name, theater\_location, screen\_quantity } }, Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity} } }

Id\_ticket, id\_seat -> {price}

***2NF***

**Theater**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

**Movie**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies |

**Slot**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_slot | start\_time | end\_time | attendance | price\_charged | id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies |

**Movie\_slot**

|  |  |  |
| --- | --- | --- |
| Id\_movie\_slot | id\_slot | id\_movie |

**Screen**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_screen | seats\_no | screen\_category | screen\_no | id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

**Schedule**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_schedule | week\_day | id\_screen | seats\_no | screen\_category | screen\_no | id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_slot | start\_time | end\_time | attendance | price\_charged | id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies |

**Seat**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id\_seat | seat\_pos | seat\_type | id\_screen | seats\_no | screen\_category | screen\_no |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

**Ticket**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_ticket | movie\_date | purchase\_date | id\_seat | seat\_pos | seat\_type | id\_screen | seats\_no | screen\_category | screen\_no |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_slot | start\_time | end\_time | attendance | price\_charged | id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies |

**Ticket\_price**

|  |  |  |
| --- | --- | --- |
| id\_ticket | id\_seat | price |

**Employee**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_employee | id\_theater | emp\_Fname | emp\_Lname | emp\_street | emp\_housenum | emp\_zip | emp\_position | emp\_phone | emp\_wage | id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

**Retrieving\_log**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_log | log\_description | log\_date | log\_time | id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification | movie\_copies | id\_employee |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| emp\_Fname | emp\_Lname | emp\_street | emp\_housenum | emp\_zip | emp\_position | emp\_phone | emp\_wage |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no | id\_screen | seats\_no | screen\_category | screen\_no |

Dependencias funcionales:

Id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity }

Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification }

Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } }

Id\_slot -> { start\_time, end\_time, attendance, price\_charged, id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification } }

Id\_movie\_slot -> Id\_slot -> { start\_time, end\_time, attendance, price\_charged}, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies} }

Id\_schedule -> { week\_day, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } }, id\_slot -> { start\_time, end\_time, attendance, price\_charged, id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification } } }

Id\_seat -> { seat\_pos, seat\_type, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } } }

Id\_ticket -> { movie\_date, purchase\_date, id\_seat -> { seat\_pos, seat\_type, id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity } } }, Id\_slot -> { start\_time, end\_time, attendance, price\_charged, id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification } } }

Id\_employee -> {emp\_Fname, emp\_Lname, emp\_street, emp\_housenum, emp\_zip, emp\_position -> { emp\_wage}, emp\_phone, Id\_theater -> { theater\_name, theater\_location, screen\_quantity } }

Id\_log -> log\_date, log\_time, log\_description, Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification, movie\_copies}, Id\_employee -> {emp\_Fname, emp\_Lname, emp\_street, emp\_housenum, emp\_zip, emp\_position -> { emp\_wage}, emp\_phone, Id\_theater -> { theater\_name, theater\_location, screen\_quantity } }, Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater -> { theater\_name, theater\_location, screen\_quantity} } }

Id\_ticket, id\_seat -> {price}

***3NF***

**Theater**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| id\_theater | theater\_name | screen\_quantity | theater\_street | theater\_zip | theater\_building\_no |

**Movie**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| id\_movie | movie\_name | movie\_duration | movie\_type | movie\_genre | movie\_clasification |

**Slot**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| id\_slot | start\_time | end\_time | attendance | price\_charged |

**Screen**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| id\_screen | seats\_no | screen\_category | screen\_no | id\_theater |

**Schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| id\_schedule | week\_day | id\_screen | id\_slot |

**Seat**

|  |  |  |  |
| --- | --- | --- | --- |
| id\_seat | seat\_pos | seat\_type | id\_screen |

**Ticket**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| id\_ticket | movie\_date | purchase\_date | id\_seat | id\_slot |

**Ticket\_price**

|  |  |  |
| --- | --- | --- |
| id\_ticket | id\_seat | price |

**Movie\_slot**

|  |  |  |
| --- | --- | --- |
| Id\_movie\_slot | id\_slot | id\_movie |

**Employee**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id\_employee | id\_theater | emp\_Fname | emp\_Lname | emp\_street | emp\_housenum | emp\_zip | emp\_phone | Id\_position |

**Employee\_wage**

|  |  |  |
| --- | --- | --- |
| id\_position | emp\_position | emp\_wage |

**Retrieving\_log**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id\_log | log\_description | log\_date | log\_time | id\_movie | Id\_employee | id\_screen |

Dependencias funcionales:

Id\_theater -> { theater\_name, theater\_street, theater\_zip, theater\_building\_no , screen\_quantity }

Id\_screen -> { seats\_no, screen\_category, screen\_no, id\_theater }

Id\_movie -> { movie\_name, movie\_duratio, movie\_type, movie\_genre, movie\_clasification }

Id\_slot -> { start\_time, end\_time, attendance, price\_charged }

Id\_schedule -> { week\_day, id\_screen, id\_slot }

Id\_seat -> { seat\_pos, seat\_type, id\_screen }

Id\_ticket -> { movie\_date, purchase\_date, id\_seat, Id\_slot }

Id\_ticket, id\_seat -> {price}

Id\_movie\_slot -> {id\_movie, id\_slot}

Id\_employee -> {emp\_Fname, emp\_Lname, emp\_street, emp\_housenum, emp\_zip, emp\_phone, Id\_theater}

Id\_position -> {emp\_position, emp\_wage}

id\_log -> {log\_description, log\_date, log\_time, id\_movie, id\_employee, id\_screen}

***Asunciones:***

* La entidad weekly\_schedule se antojó necesaria para poder otorgar una programación semanal a cada pantalla.
* La información de los seats se decidió agregar debido a que encontramos que pueden haber distintos tipos de asientos en una sala y de esta manera es más fácil identificar los asientos escogidos en los tickets.
* Se decidió agregar la entidad ticket con el objetivo de tener un mecanismo de control de asistencia.
* Price no linkeado con asiento, ni pelicula, ni screen
* Género y clasificación de películas, comerciales y tráilers: campos agregados a la entidad movie los cuales también son registrados en la vida real.
* En la entidad screen fue añadido el atributo screen\_category ya que observamos que existen varios tipos o categorías de salas en un cine/teatro de la vida real.