# CISC 332 Final Report (Team 118)

Luis Rivera-Wong - 10142361 Quentin Petraroia - 10145835 Braedan Robinson - 10188414

#### <u>Assumptions</u>

- 1. There will be ONE address per user/theatre complex/supplier
- 2. There will be ONE phone number per user/theatre complex/supplier
- 3. Only a registered user can leave a movie review even if they haven't seen the movie they can still leave a review because they may have seen it before/using a different website
- 4. You need to input a credit card to register for an account

#### **Problems Encountered During Development**

After we received the go ahead from Professor Powley, to use the laravel framework, our group quickly got to work understanding it. One of the first problems we encountered was figuring out where to start the project. As a group we instantly felt overwhelmed with how much we had to do and how little time we would have to get it done. After hours of brainstorming, we proposed an idea of how we can cut the work into chunks and work on parts at a time, and then connect them at the end. This was a good idea as we were able to knock out the front end design of the website fairly quickly.

When exploring the use of an API to build an adoptable user interface, we encountered a problem with querying the database. The error didn't give what we expected which was to obtain a value from the database through a form-specified query about an attribute. Trying to solve the problem, it consumed hours of progress so eventually we decided to scrap a lot of the dependencies and form use through Vue.js. We realized that it was hard to learn multiple technologies as well as databases at the same time. As a group we resided with using Laravel and a minimal amount Vue components as it was not making our product any better and was just wasting production time.

Another problem we ran into was the lack of organization in terms of meeting, and focusing on development of the project. Due to each of our busy schedules we found it hard to meet at decent hours during the day, which resulted in each of us remotely working on components. This resulted in confusion when bringing the individual components together near the final deliverable deadline which caused a plethora of errors, and headaches. In order to complete the project we had to individually run-through our contributions, what the code was accomplishing, how to access and utilize the functions, and how to handle the output. The

process took more time away from development, but in the end we were able to fix the errors, complete the project and gain a new set of knowledge about a new powerful framework.

#### <u>Important Design and Implementation Decisions</u>

While thinking about our project. Our group decided on trying to implement as close to a production level website as we could. We wanted users of our website to make sure they felt safe and secure. By implementing front end and back end validations we knew that our users would always be inputting the correct input while signing up for our website. The reason why we included both was because that front end validations can easily be tricked. Also, because front end validations require javascript, we knew that if a user had javascript deactivated that none of our validations would work. By implementing back end validations as well, we for sure know that the users input could be checked by a validator and rejected if it is not the proper form submission.

Another important design discussion we had with our group was that of user authentication. How could we tell that users are logged in? How could we make sure that someone couldn't buy tickets if they didn't have an account? The answer to this question was the use of middleware. By implementing custom middleware we were able to verify that the user was a authenticated user. An example of this would be if someone who is not logged in typed the specific url of the purchase page, they would be instantly directed to the login page. Using our custom middleware we were able to apply it directly to the admin side of the website. By creating a special PHP function is\_admin in our user model. We were able to check the roles of the users. If a user was equal to the role "1", then that user was an admin. We used this custom function in our Routes file to check against the HTTP requests (GET, POST) to make sure we would display the proper views for the admin or the regular user.

We decided to keep the design scheme of the website as simple as possible in order to create a user-friendly environment, that is easy accessible. In terms of styling, we decided to use bootstrap to create a responsive website, which makes it accessible for multi-platform use and creates appropriately sized blocks according to sections of the webpage. Another styling feature, we went with basic identifiable colours that is easy on the eyes, which created visually appealing button styling.

# The Technologies and Tools Used In Developing the Application, Why and Experience Using Them

#### Laravel

We decided to challenge ourselves to create a enterprise-level project purposely to learn more about the model-view-controller architecture and enterprise-level database management. After receiving permission from Professor Powley to use the PHP framework Laravel, we began learning it as fast as possible. Laravel is a PHP framework intended for web development which follows the model-view-controller (MVC) architecture. It comes with a dedicated dependency manager, and alternate ways of accessing a database. Trying to learn a framework at the same time as developing a project was quite a headache at the start due to the learning curve compounded by all of the new technologies we decided to add to our stack. After the basic functionalities were mastered, it made development a lot faster, with a lot less errors.

By using Laravel we were able to follow industry standards by using the MVC architecture. The model interacts our database and responds to requests made from the controller. The controller serves as the middle-man between the view and the database managing assets, data and routing. Lastly, the view is only responsible for the view logic while receiving all necessary data from the controller.

#### **Bootstrap**

Another web development tool we decided to add onto our stack was Bootstrap. Bootstrap made it easy for us to design a stylish yet minimalistic website. Including various design templates for forms, buttons and typography bootstrap was able to help us turn a plain html/css website into a stylish well designed app.

#### Docker

Our team was fortunate enough to have members with DevOps and Backend Development experience which allowed us to organize our stack in a way similar to production web applications. The DevOps team was able to create and distribute a docker image along with a docker compose configuration. The main reason for adding this extra work was to allow the entire team to work with the same development environment and reduce the possibility of errors occuring due to global package installs, differences in versions and a myriad of other issues when development across different operating systems and machines. In addition to this, the benefits of working with isolated containers allows for easier development on other project requiring similar services such as another application needing a database. Lastly, the added security benefits of using these isolated containers compared to XAMPP's poor default security were a plus.

In summary, the development environment was setup using a MySQL 5.7 database, along with phpMyAdmin 4.7, and nginx 1.13.11 as our reverse proxy and web server. All of the mentioned containers used Debian stretch:slim as their base containers.

#### Vue.js

By default Laravel comes with Vue.js installed as the default front end framework. As a team we decided that it would be a fun challenge to learn Vue as we build our application to make our website more dynamic. At first Vue seemed like the perfect fit as we initially wanted it to interact with our API. However, as our website grew and the challenges became greater we decided that Vue might not be the perfect fit for our group due to the difficulty of building both the web app and API in parallel. We ended up still using Vue to manage front end validations, but due to the time constraint and the steep learning curve we ultimately decided that it was not worth the effort to add it to other parts of our website.

#### If We Could Go Back

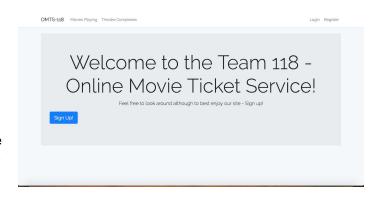
If we had the chance to go back and change things our group would have made the implementation process simpler, leaving the Laravel framework behind and using technologies learned in class. Looking back at the reason we decided to head down our development path, we wanted to create a product that uses similar technology to that of a large enterprise businesses, and to use the project as another piece of deliverables we could put on our resume. Although we finished with a solid product, it created a lot of headaches trying to learn, build the system and balance our workloads amongst other courses as well. Using HTML, CSS, PHP and JS to create the online movie ticket system would have been an easier job as our group has used each of the languages, and had some experience creating websites.

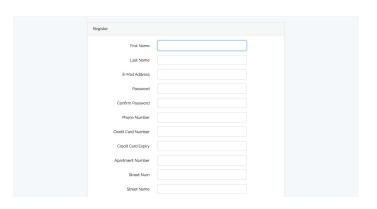
Another change we would have made is organizing set meeting times throughout the semester, and have milestones to be accomplished by each meeting. Throughout the semester a majority of our time on campus was used to focus on other courses since there were only two big deadlines for the project, so sometimes we felt that we were rushed. By meeting every week, and slowly building the project piece by piece would have prevented a lot of stress, and potentially allowed us to create even more of a polished product.

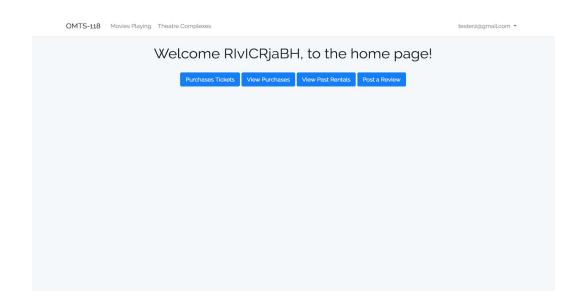
#### **User Guide**

#### Regular User:

- 1. When a regular user goes to our website. They are greeted with the homepage. Here they can choose to log in if they are already a user or register.
- 2. If a user chooses to register they fill in the following fields. Not shown in the picture is the City, Province, Country and Postal Code fields. A user must either fill in the apartment number field or the street number field.
- 3. After registering you are greeted with the user home page. Here users go through the various functionalities of the OMTS. These are shown in the buttons below as well as the items in the nay bar.







#### These functions are:

# Browse movies playing at the various theatre complexes.

- Click on "Movies Playing" located at the top left of the webpage, in the Nav bar
- Movies from each theatre complex are gathered and displayed

#### Purchase tickets movies showing theatres

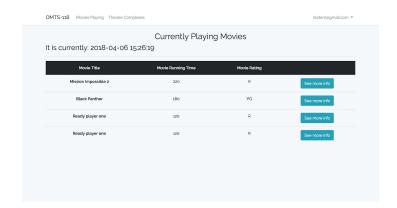
- Click on "Theatre Complexes" located at the top left of the homepage, in the Nav bar, or "Purchase Tickets" in the body of the webpage
- Select a theatre complex of choice
- Once a theatre complex is chosen you can see what movies are playing in each theatre and at what time they are showing.
- Users can also buy tickets and purchase tickets buy choosing the amount of tickets they want and then going to the add to cart page and confirming their purchase

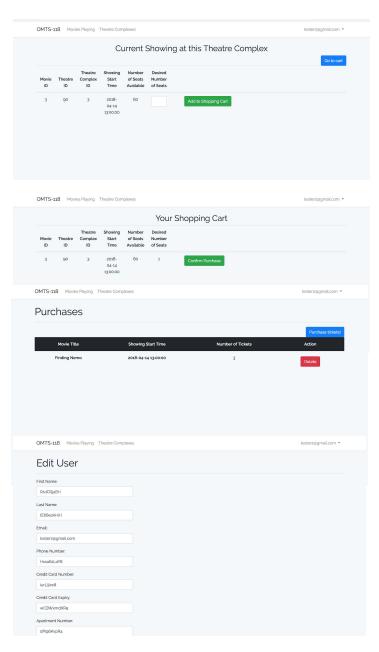
#### View ticket purchases/cancel a purchase

- Click on "View Purchases" located in the body of the homepage
- All purchased tickets for movies with future showtimes are displayed
- To cancel a ticket, the click "Delete" which will remove the purchased ticket(s) and confirm

#### **Update User personal details**

- Click the user's email for a drop down menu located in the top right of the page in the Nav bar
- Select "Edit User"
- Modify necessary user details in the corresponding text fields
- When finished, click "Update" to save the updated info





#### **Browse past rentals**

- Click on "View Past Rentals" located in the body of the homepage
- All previously purchased tickets with showtimes that have past are displayed to the user

#### Add a review for a movie

- Click on the "Post a Review" button on the body of the home page
- Click on the movie you would like to see more details/add a review to
- Add a review, and click "Create New Review" when finished

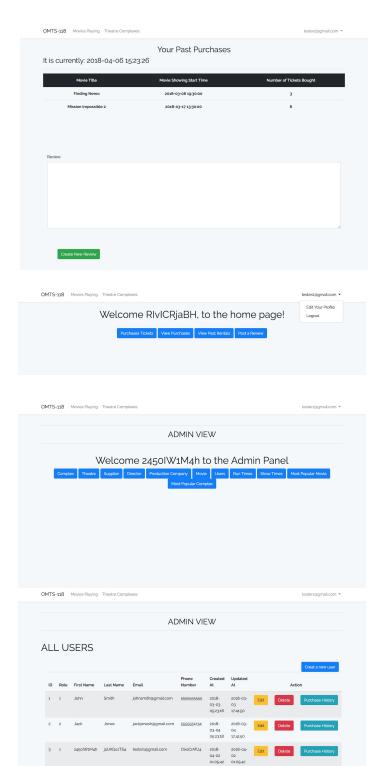
## When the user is finished with the movie ticket system (log out)

- Click the user's email for a drop down menu located in the top right of the page in the Nav bar
- Select "Log out"
- The user has now been logged out of their account!

#### Administrators:

### List all the members/remove a member/ view purchases

- Click "Users" located in the body of the homepage
- All users who registered, are displayed to the admin.
- To remove a member
  - o click on "Delete" and confirm
- To view the purchase history of a particular user
  - o Click on "Purchase history"
  - All tickets for future showtimes, and past ticket purchases are displayed



# Add or update the information for a theatre complex/theatre

- Click on "Complex" or "Theatre"
- To update the information, click on "Edit"
  - Update necessary text fields
  - o Click "Update" when finished
- To create a new complex or theatre
  - Click "Create New (Complex/Theatre)"
  - Enter information about the theatre or complex
  - When finished click "Create New"
- To delete a complex or theatre
  - Click "Delete" and confirm

# ADMIN VIEW Theatre OMTS-118 Movies Playing Theatre Complexes ADMIN VIEW ADMIN VIEW Theatre Complexes ADMIN VIEW Theatre Complexes Finaltre Complexes Finaltre Complexe Theatre Complexe Phone City Province Country Number KelownaScreens 222222222 Kelowna BC Carada Est Codate KingstonScreens 33333333 Kingston CN Carada Est Codate VancouverScreens 4444444 Vancouver BC Carada Est Codate TorontoScreens 55555555 Toronto CN Carada Est Codate testiScreens 98778966 Vernon BC Carada Est Codate

#### Add movies to the database

- Click on "Movie"
- Click "Create a new movie"
- Enter the details of the movie, the location and showtime
- Click "Create New" to confirm the new movie

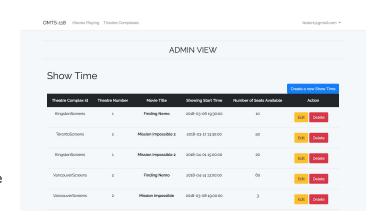
# Movie S Movie Running Time Movie Running Time Movie Running Time Movie Running Time Movie Director M Movie Production Company M Action Mission impossible 12 220 R 7 1 GGE Dates Finding Nema 100 G G 1 1 GGE Dates Bobs Burgers 64 R 8 8 2 GGE Dates Ready player one 120 R 8 8 2

#### Update where/when movies are showing

- Click on "Show Times"
- Select the movie to update and click "Edit" to modify information
- When finished click "Update" to save the information

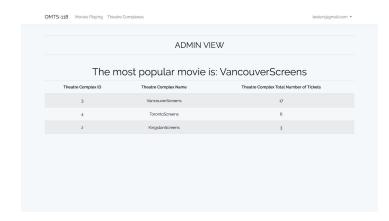
#### Find the most popular movie

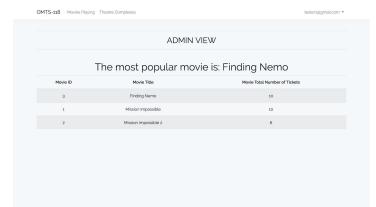
- Click on the "Most Popular Movie" button on the home page
- The most popular movies are displayed in descending order



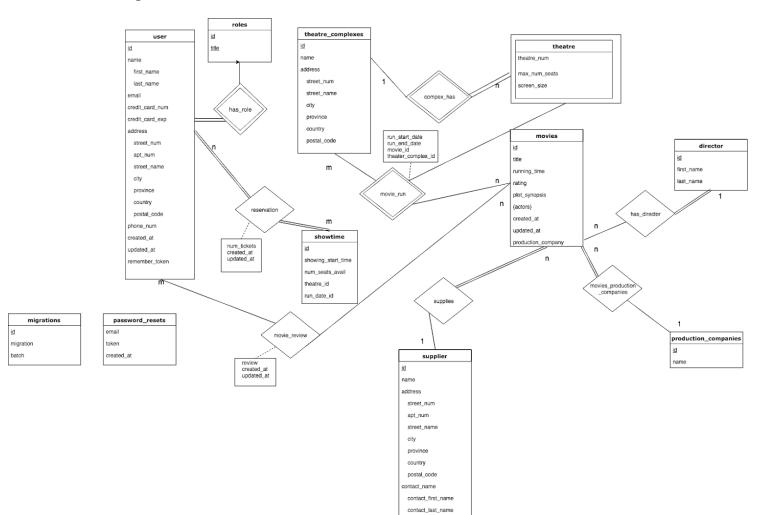
#### Find the most popular theatre complex

- Click on the "Most Popular Complex" button on the home page
- The most popular theatre complexes are displayed in descending order





#### **ER Diagram**



#### **Relational Schema**

```
create database OMTS;
use OMTS;
CREATE TABLE `actors` (
  `id` int(10) UNSIGNED NOT NULL,
  `first_name` varchar(255) NOT NULL,
  `last_name` varchar(255) NOT NULL,
  PRIMARY KEY (`id`)
);
CREATE TABLE `actors_movies` (
  `actor id` int(10) UNSIGNED NOT NULL,
  `movie_id` int(10) UNSIGNED NOT NULL,
  PRIMARY KEY (`actor_id`, `movie_id`),
  KEY `actors_movies_movie_id_foreign` (`movie_id`)
);
CREATE TABLE `carts` (
  `id` int(10) UNSIGNED NOT NULL,
  `user_id` int(10) UNSIGNED NOT NULL,
  `showing_id` int(10) UNSIGNED NOT NULL,
  `run_date_id` int(10) UNSIGNED NOT NULL,
  `number_of_tickets` int(11) NOT NULL,
   `created_at` timestamp NULL DEFAULT NULL,
   `updated_at` timestamp NULL DEFAULT NULL,
  PRIMARY KEY (`id`),
  KEY `carts_user_id_foreign` (`user_id`),
  KEY `carts_showing_id_foreign` (`showing_id`),
  KEY `carts_run_date_id_foreign` (`run_date_id`)
);
```

```
CREATE TABLE `directors` (
  `id` int(10) UNSIGNED NOT NULL,
  `first_name` varchar(255) NOT NULL,
  `last name` varchar(255) NOT NULL,
  PRIMARY KEY (`id`)
);
CREATE TABLE `migrations` (
  `id` int(10) UNSIGNED NOT NULL,
  `migration` varchar(255) NOT NULL,
  `batch` int(11) NOT NULL,
  PRIMARY KEY (`id`)
);
CREATE TABLE `movies` (
  `id` int(10) UNSIGNED NOT NULL,
  `title` varchar(255) NOT NULL,
  `running time` int(11) NOT NULL,
  `rating` varchar(255) NOT NULL,
  `plot synopsis` text NOT NULL,
  `director id` int(10) UNSIGNED DEFAULT NULL,
  `prod comp id` int(10) UNSIGNED DEFAULT NULL,
  `supplier id` int(10) UNSIGNED DEFAULT NULL,
  PRIMARY KEY (`id`),
  KEY `movies_director_id_foreign` (`director_id`),
  KEY `movies_prod_comp_id_foreign` (`prod_comp_id`),
  KEY `movies supplier id foreign` (`supplier id`)
);
CREATE TABLE `password resets` (
  `email` varchar(255) NOT NULL,
  `token` varchar(255) NOT NULL,
   `created at` timestamp NULL DEFAULT NULL,
  KEY `password_resets_email_index` (`email`)
);
```

```
CREATE TABLE `production_companies` (
  `id` int(10) UNSIGNED NOT NULL,
  `name` varchar(255) NOT NULL,
  PRIMARY KEY (`id`)
);
CREATE TABLE `reservations` (
  `id` int(10) UNSIGNED NOT NULL,
  `user_id` int(10) UNSIGNED DEFAULT NULL,
  `showing_id` int(10) UNSIGNED DEFAULT NULL,
  `number_of_tickets` int(10) UNSIGNED NOT NULL,
  PRIMARY KEY (`id`),
  KEY `reservations_user_id_foreign` (`user_id`),
  KEY `reservations_showing_id_foreign` (`showing_id`)
);
CREATE TABLE `reviews` (
  `user_id` int(10) UNSIGNED NOT NULL,
  `movie id` int(10) UNSIGNED NOT NULL,
  `review` text NOT NULL,
  `created at` timestamp NULL DEFAULT NULL,
  `updated_at` timestamp NULL DEFAULT NULL,
  PRIMARY KEY (`user_id`, `movie_id`),
  KEY `reviews_movie_id_foreign` (`movie_id`)
);
CREATE TABLE `roles` (
  `id` int(10) UNSIGNED NOT NULL,
  `title` varchar(255) NOT NULL,
 PRIMARY KEY (`id`)
);
CREATE TABLE `run dates` (
  `id` int(10) UNSIGNED NOT NULL,
  `movie_id` int(10) UNSIGNED NOT NULL,
```

```
`theatre_complex_id` int(10) UNSIGNED NOT NULL,
   `run start date` date NOT NULL,
  `run end date` date NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `run dates movie id theatre complex id unique`
(`movie_id`,`theatre_complex_id`),
  KEY `run_dates_theatre_complex_id_foreign` (`theatre_complex_id`)
);
CREATE TABLE `show times` (
  `id` int(10) UNSIGNED NOT NULL,
  `theatre id` int(10) UNSIGNED NOT NULL,
  `showing start time` datetime NOT NULL,
  `num seats avail` int(10) UNSIGNED NOT NULL,
  `run date id` int(10) UNSIGNED NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `showing_id` (`theatre_id`, `showing_start_time`, `run_date_id`),
  KEY `show_times_run_date_id_foreign` (`run_date_id`)
);
CREATE TABLE `suppliers` (
  `id` int(10) UNSIGNED NOT NULL,
  `name` varchar(255) NOT NULL,
  `phone num` varchar(255) NOT NULL,
  `contact_first_name` varchar(255) NOT NULL,
  `contact last name` varchar(255) NOT NULL,
  `apt num` varchar(255) NOT NULL,
  `street num` varchar(255) NOT NULL,
  `street name` varchar(255) NOT NULL,
  `city` varchar(255) NOT NULL,
  `province` varchar(255) NOT NULL,
  `country` varchar(255) NOT NULL,
  `postal_code` varchar(255) NOT NULL,
  PRIMARY KEY ('id')
);
CREATE TABLE `theatres` (
```

```
`id` int(10) UNSIGNED NOT NULL,
   `theatre_num` varchar(255) NOT NULL,
  `max_num_seats` int(11) NOT NULL,
   `screen size` int(11) NOT NULL,
  `theatre complex id` int(10) UNSIGNED NOT NULL,
  PRIMARY KEY (`id`),
  KEY `theatres_theatre_complex_id_foreign` (`theatre_complex_id`)
);
CREATE TABLE `theatre complexes` (
  `id` int(10) UNSIGNED NOT NULL,
  `name` varchar(255) NOT NULL,
  `phone num` varchar(255) NOT NULL,
  `street num` varchar(255) NOT NULL,
  `street name` varchar(255) NOT NULL,
  `city` varchar(255) NOT NULL,
  `province` varchar(255) NOT NULL,
  `country` varchar(255) NOT NULL,
  `postal code` varchar(255) NOT NULL,
  PRIMARY KEY (`id`)
);
CREATE TABLE `users` (
  `id` int(10) UNSIGNED NOT NULL,
  `role id` int(10) UNSIGNED NOT NULL DEFAULT '2',
  `first name` varchar(255) NOT NULL,
  `last name` varchar(255) NOT NULL,
  `email` varchar(255) NOT NULL,
   `password` varchar(255) NOT NULL,
  `phone num` varchar(255) NOT NULL,
   `credit_card_num` varchar(255) NOT NULL DEFAULT '',
   `credit card exp` varchar(255) NOT NULL DEFAULT '',
   `apt num` varchar(255) NOT NULL,
   `street num` varchar(255) NOT NULL,
   `street name` varchar(255) NOT NULL,
```

```
`city` varchar(255) NOT NULL,
   `province` varchar(255) NOT NULL,
  `country` varchar(255) NOT NULL,
  `postal code` varchar(255) NOT NULL,
  `remember token` varchar(100) DEFAULT NULL,
  `created at` timestamp NULL DEFAULT NULL,
  `updated at` timestamp NULL DEFAULT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `users email unique` (`email`),
  KEY `users_role_id_foreign` (`role_id`)
);
INSERT INTO `actors` (`id`, `first name`, `last name`) VALUES
(3, 'Dory', 'Fish'),
(6, 'Stacy', 'Jones');
INSERT INTO `actors movies` (`actor id`, `movie id`) VALUES
(3, 1),
(6, 1),
(6, 2),
(3, 3);
INSERT INTO `carts` (`id`, `user id`, `showing id`, `run date id`,
`number of tickets`, `created at`, `updated at`) VALUES
(1, 4, 4, 4, 1, '2018-04-06 14:37:26', '2018-04-06 14:37:26');
INSERT INTO `directors` (`id`, `first_name`, `last_name`) VALUES
(6, 'Jason', 'Bourne'),
(7, 'John', 'Wick'),
(8, 'Tony', 'Stark');
```

```
INSERT INTO `migrations` (`id`, `migration`, `batch`) VALUES
(1, '2014 10 11 000000 create roles table', 1),
(2, '2014 10 12 000000 create users table', 1),
(3, '2014 10 12 100000 create password resets table', 1),
(4, '2018 02 24 031625 create production companies table', 1),
(5, '2018 02 24 031627 create movies table', 1),
(6, '2018 02 24 031628 create directors table', 1),
(7, '2018 02 24 183737 create actors table', 1),
(8, '2018 02 24 183738 create actors movies table', 1),
(9, '2018 02 24 184631 create suppliers table', 1),
(10, '2018 02 24 202726 create theatre complexes table', 1),
(11, '2018 02 24 204701 create theatres table', 1),
(12, '2018 02 24 212421 create run dates table', 1),
(13, '2018 02 24 212529 create show times table', 1),
(14, '2018 02 24 225510 create reservations table', 1),
(15, '2018 02 24 230741 create reviews table', 1),
(16, '2018 03 29 170630 add foreign keys to movies', 1),
(17, '2018 04 01 155604 create carts table', 1);
INSERT INTO `movies` ('id', `title', `running time`, `rating`, `plot synopsis`,
`director id`, `prod comp id`, `supplier id`) VALUES
(1, 'Mission Impossible', 120, 'PG', 'Tom Cruise is on a mission yeehaw', 6, 1, 20),
(2, 'Mission Impossible 2', 220, 'R', 'Tom Cruise is back on a mission', 7, 1, 60),
(3, 'Finding Nemo', 100, 'G', 'A dad fish looses his son and must find him', 6, 1,
20),
(4, 'Bobs Burgers', 64, 'R', 'its burger time', 8, 2, 61),
(5, 'Ready player one', 120, 'R', 'You are in a video game! WOW!', 8, 2, 61),
(7, 'Black Panther', 180, 'PG', 'Black panther is a super hero movie', 7, 1, 60);
INSERT INTO `production companies` (`id`, `name`) VALUES
(1, 'MGM'),
(2, 'TMG');
```

```
INSERT INTO `reservations` (`id`, `user id`, `showing id`, `number of tickets`)
VALUES
(30, 4, 1, 3),
(99, 4, 2, 6),
(100, 4, 4, 3),
(101, 3, 5, 3),
(102, 3, 5, 1),
(103, 1, 4, 2),
(104, 1, 5, 2),
(105, 6, 5, 1),
(106, 6, 5, 2),
(108, 7, 5, 1),
(109, 7, 4, 2);
INSERT INTO `reviews` (`user_id`, `movie_id`, `review`, `created_at`, `updated_at`)
VALUES
(1, 1, 'bang bang bang pow', '2018-03-02 00:00:00', '2018-03-02 00:00:00'),
(1, 3, 'sad movie...', '2018-03-17 00:00:00', '2018-03-18 00:00:00'),
(7, 3, 'Great movie!', '2018-04-04 00:00:00', '2018-04-04 00:00:00');
INSERT INTO `roles` (`id`, `title`) VALUES
(1, 'admin'),
(2, 'user');
INSERT INTO `run_dates` (`id`, `movie_id`, `theatre_complex_id`, `run_start_date`,
`run end date`) VALUES
(1, 3, 2, '2018-03-01', '2018-03-16'),
(2, 2, 4, '2018-03-16', '2018-03-22'),
(3, 2, 2, '2018-03-31', '2018-04-14'),
(4, 3, 3, '2018-04-14', '2018-04-21'),
(5, 1, 3, '2018-04-07', '2018-04-15'),
(10, 7, 7, '2018-03-02', '2018-04-18'),
```

```
(11, 5, 5, '2018-03-19', '2018-04-19'),
(13, 5, 7, '2018-03-28', '2018-04-20');
INSERT INTO `show times` (`id`, `theatre id`, `showing start time`,
`num seats avail`, `run date id`) VALUES
(1, 55, '2018-03-06 19:30:00', 10, 1),
(2, 90, '2018-03-17 13:30:00', 50, 2),
(3, 55, '2018-04-01 15:00:00', 20, 3),
(4, 90, '2018-04-14 13:00:00', 60, 4),
(5, 90, '2018-03-08 19:00:00', 3, 5),
(7, 95, '2018-04-04 00:00:00', 55, 4),
(8, 97, '2018-03-27 00:00:00', 32, 11);
INSERT INTO `suppliers` (`id`, `name`, `phone num`, `contact first name`,
`contact last name`, `apt num`, `street num`, `street name`, `city`, `province`,
`country`, `postal code`) VALUES
(20, 'Some Supplier', '1234567788', 'Mike', 'Will Make Money', '', '55', 'Some
Street', 'Some City Name', 'Quebec', 'Canada', 'H8G1J0'),
(60, 'BestSupplier', '7894561122', 'Micheal', 'Li', '89', '88', 'JayZ Drive',
'Ottawa', 'Ontario', 'Canada', 'K9F1H6'),
(61, 'QSupplier', '89867655', 'Quentin', 'Jones', '', '23', 'Big srt', 'Edmonton',
'AB', 'Canada', 'K9K4S');
INSERT INTO `theatres` (`id`, `theatre num`, `max num seats`, `screen size`,
`theatre complex id`) VALUES
(55, '1', 200, 20, 1),
(90, '2', 150, 15, 2),
(91, '3A', 400, 500, 5),
(93, '3B', 3, 4, 5),
(95, '4A', 90, 88, 7),
(97, '4B', 799, 800, 7),
(99, '5A', 999, 8000, 4);
```

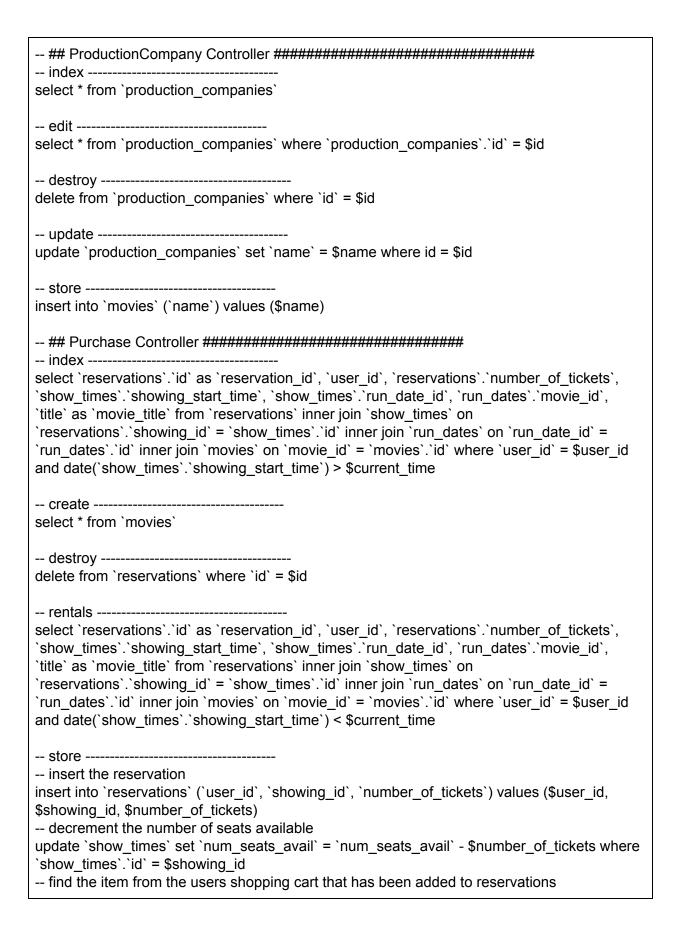
```
INSERT INTO `theatre complexes` (`id`, `name`, `phone num`, `street num`,
`street name`, `city`, `province`, `country`, `postal code`) VALUES
(1, 'KelownaScreens', '222222222', '123', 'main street', 'Kelowna', 'BC', 'Canada',
'V1B4Z1'),
(2, 'KingstonScreens', '33333333', '543', 'cherry street', 'Kingston', 'ON',
'Canada', 'K4X8H2'),
(3, 'VancouverScreens', '44444444', '723', 'bloop street', 'Vancouver', 'BC',
'Canada', 'M2R7Z9'),
(4, 'TorontoScreens', '55555555', '742', 'bleep street', 'Toronto', 'ON', 'Canada',
'M9K8J4'),
(5, 'testScreens', '98778966', '159', 'Pinegrove', 'Vernon', 'BC', 'Canada',
'V3B9C2'),
(7, 'PentictonScreens', '65465465', '982', 'Blank', 'Street', 'AB', 'Canada',
'B8Y3D');
INSERT INTO `users` (`id`, `role id`, `first name`, `last name`, `email`,
'password', 'phone num', 'credit card num', 'credit card exp', 'apt num',
`street num`, `street name`, `city`, `province`, `country`, `postal code`,
`remember token`, `created at`, `updated at`) VALUES
(1, 1, 'John', 'Smith', 'johnsmith@gmail.com', '12345678', '5555555555',
'1234567890123456', '0421', '43', '644', 'Johnson St.', 'Kingston', 'Ontario',
'Canada', 'K7K4S1', NULL, '2018-03-03 05:23:18', '2018-03-03 17:41:50'),
(2, 2, 'Jack', 'Jones', 'jackjonesh@gmail.com', '12345678', '5555551234',
'9999999999999', '0522', '', '633', 'Princess St.', 'Kingston', 'Ontario',
'Canada', 'K7K4S2', NULL, '2018-03-04 05:23:18', '2018-03-04 17:41:50'),
(3, 1, '2450IW1M4h', 'jaUKGoJTS4', 'tester1@gmail.com',
'$2y$10$2w3.yi/iqxXxiTHUO7nIjuU1X6GJrI7qIFtMTR12SZnbUSdhYUKfm', 'OixsCrAfU4',
'Diq5MMpXyx', 'bryLPrakPk', '2h12Tw8YnF', 'rXD7A67WpV', 'Q8d18tWwre', 'fvIh8821T1',
'Ia3rf2H3BP', 'j16r4gKEeY', 'aC9d0YHryz',
'yjlqRtVKQYoRfeKsBkmqpsIlqy3nqmzUhZ1EemJ4OTuMdMA6FhLZTJw6qGfA', '2018-04-02
01:05:42', '2018-04-02 01:05:42'),
(4, 2, 'RIvICRjaBH', 'tE68e2kHiH', 'tester2@gmail.com',
'$2y$10$t8/DUtaiN3chww8dvBS0net0.ybVna3RX8eO6ZH6DshH7SHyDdQyG', 'Hxsa6zLoY8',
'iurLIjIxx8', 'wCBWxmdXR9', 'dPl96KvpR4', 'jK5IzhBAFW', '7b6bGsYSQm', 'Qq7XfrNzf3',
'M996Gox4GJ', 'rvbrxOC6ee', 'OiFDQ96AJ1',
```

```
'2dpkm1dqu73F7dRZ1hIL2B4RIpH7GJNiT0C219IzUwMbrVH0z7WDptSmVXwy', '2018-04-02
01:05:42', '2018-04-02 01:05:42'),
(6, 2, 'Bob', 'Billy', 'bob@gmail.com',
'$2y$10$C8CJ.yF8Q2XOnO.Jvu4hqOepeH6KdO5PUCwwWeiVnyvHgp5obxWxC', '2508643851',
'99999999999', '1212', '', '24', 'br street', 'Toronto', 'ON', 'Canada', 'K7L
4A6', 'dQGhdlwufkaUdx0DtpCGGzclGxhKVa5YiyIYetnHQB16VWtdy6601qZ702sJ', '2018-04-02
10:46:46', '2018-04-02 10:47:38'),
(7, 2, 'Curtis', 'Miller', 'Kdog@gmail.com',
'$2y$10$kHBek7GCm6jby/ma2tyIZe8tBieFW1T.Tkxd2dkp14S.pBQ1NJM1.', '9999999',
'12345678', '1221', '', '22', 'borg street', 'Vernon', 'BC', 'Canada', 'v9xb5w',
'9PX4a28xeFX2HIqb9MN4HuSQkcGL7zGwPsEqNqMyY0hWAL9OFFSeDN7pYFls', '2018-04-02
11:45:41', '2018-04-02 11:45:54'),
(8, 2, 'Bobby', 'Jones', 'bobby@gmail.com',
'$2y$10$hNAuvf021klAqS9KMLK/R.V1WHvcvrAd8HUUpf6h9ntc4PemF/YLe', '6565676',
'65543234', '543342', '', '11', 'Pinegrove', 'Kelown', 'BC', 'Canada', 'V8WI2K',
'jWOFjdbJBFKnYKKxXcO9wGcfR9y8rLjrOOOBIDrqdHTEqtZp312fG82yeIXW', '2018-04-02
13:09:20', '2018-04-02 13:09:20');
```

#### **SQL Queries**

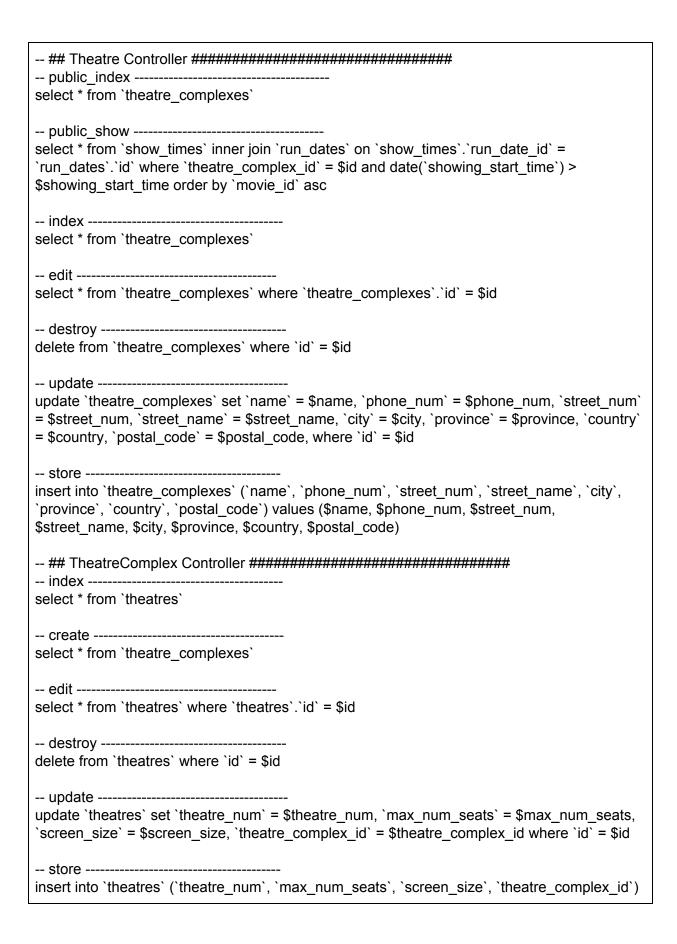
```
insert into `carts` (`user_id`, `showing_id`, `run_date_id`, `number_of_tickets`, `updated_at`,
'created at') values ($user id, $showing id, $run date id, $number of tickets, $updated at,
$created at)
----- show -----
select *, 'temp'.'id' as 'cart id' from 'carts' as 'temp' inner join 'show times' on
'temp'.'showing id' = 'show times'.'id' inner join 'run dates' on 'temp'.'run date id' =
`run_dates`.`id` where `temp`.`user_id` = $id
----- index -----
select * from `directors`
----- show -----
select * from `directors` where `directors`.'id` = $id
----- delete ------
delete from 'directors' where 'id' = $id
---- store -----
insert into 'directors' ('first name', 'last name') values ($first name, $last name)
---- playing -----
select 'movies'.'id' as 'id', 'movies'.'running time' as 'running time', 'movies'.'rating' as
`rating`, `movies`.`plot_synopsis` as `plot_synopsis`, `movies`.`director_id`,
'movies'.'prod comp id', 'movies'.'supplier id', 'run dates'.'theatre complex id',
`movies`.`title` as `title` from `movies` inner join `run_dates` on `movies`.`id` =
`run_dates`.`movie_id` where date(`run_start_date`) < $current_time and
date('run end date') >= $current time
---- reviews -----
select * from `movies`
----- write_review -----
insert into 'reviews' ('user id', 'movie id', 'review') values ($user id, $movie id, $review)
----- public show -----
-- reviews
select * from `reviews` inner join `users` on `reviews`.`user_id` = `users`.`id`
select `movies`.`title` as `movie_title`, `movies`.`running_time`, `movies`.`rating`,
'movies'.'plot synopsis', 'production companies'.'name' as 'prod comp name',
`suppliers`.`name` as `supplier_name`, `movies`.`id` as `movie_id`, `directors`.`first_name` as
'director first name', 'directors'.'last name' as 'director last name' from 'movies' inner join
```

```
`directors` on `movies`.`director_id` = `directors`.`id` inner join `production_companies` on
`movies`.`prod_comp_id` = `production_companies`.`id` inner join `suppliers` on
'movies'.'supplier id' = 'suppliers'.'id' where 'movies'.'id' = $movie id
---- index -----
select * from `movies`
---- create -----
-- movies
select * from `movies`
-- actors
select * from `actors`
-- directors
select * from `directors`
-- production companies
select * from `production companies`
-- suppliers
select * from `suppliers`
---- edit -----
-- movies
select * from `movies` where `movies`.`id` = $id
-- actors
select * from `actors`
-- directors
select * from `directors`
-- production companies
select * from `production_companies`
-- suppliers
select * from `suppliers`
----- delete -----
delete from 'movies' where 'id' = $id
---- update -----
-- get specified movie
update 'movies' set 'title' = $title, 'running_time' = $running_time, 'rating' = $rating,
'plot synopsis' = $plot synopsis, 'director id' = $director id, 'prod comp id' =
$prod_comp_id, `supplier_id` = $supplier_id where id=$movie_id
-- get a single actor info
select * from `actors` where `actors`.'id` = $id
insert into 'movies' ('title', 'running_time', 'rating', 'plot_synopsis', 'director_id',
`prod_comp_id`, `supplier_id`) values ($title, $running_time, $rating, $plot_synopsis,
$director_id, $prod_comp_id, $supplier_id)
```



```
select * from `carts` where `carts`.`id` = $cart id
-- delete the confirmed reservation
delete from `carts` where `id` = $cart id
-- movie stats -----
select movie id, title, sum(number of tickets) as sum num tickets from 'reservations' as
'temp' inner join 'show times' on 'temp'.'showing id' = 'show times'.'id' inner join
`run_dates` on `run_date_id` = `run_dates`.`id` inner join `movies` on `movie_id` =
'movies'.'id' group by movie id order by 'sum_num_tickets' desc
-- complex_stats -----
select theatre complex id, name, sum(number of tickets) as sum num tickets from
`reservations` as `temp` inner join `show_times` on `temp`.`showing_id` = `show_times`.`id`
inner join 'run dates' on 'run date id' = 'run dates'.'id' inner join 'theatre complexes' on
'theatre complex id' = 'theatre complexes'.'id' group by theatre complex id order by
'sum num tickets' desc
select * from `run_dates`
select * from `run dates` where `run dates`.`id` = $id
-- destroy -----
delete from `run_dates` where `id` = $id
-- update -----
update 'run dates' set 'movie id' = $movie id, 'theatre complex id' = $theatre complex id,
'run start date' = $run start date, 'run end date' = $run end date where 'id' = $id
insert into `run_dates` (`movie_id`, `theatre_complex_id`, `run_start_date`, `run_end_date`)
values ($movie id, $theatre complex id, $run start date, $run end date)
select 'movies'. 'title' as 'movie title', 'theatre complexes'. 'name' as
`theatre_complex_name`, `show_times`.`num_seats_avail`,
'show times'.'showing start time', 'show times'.'id' as 'show time id',
'theatres'.'theatre num' from 'show times' inner join 'run dates' on
'show times'.'run date id' = 'run dates'.'id' inner join 'movies' on 'run dates'.'movie id' =
'movies'.'id' inner join 'theatre complexes' on 'run dates'.'theatre complex id' =
`theatre_complexes`.`id` inner join `theatres` on `show_times`.`theatre_id` = `theatres`.`id`
-- edit -----
-- show time
```

```
select 'movies'.'title' as 'movie_title', 'theatre_complexes'.'name' as
`theatre_complex_name`, `show_times`.`num_seats_avail`,
`show_times`.`showing_start_time`, `show_times`.`id` as `show_time_id`,
`show_times`.`theatre_id`, `show_times`.`run_date_id` from `show_times` inner join
'run dates' on 'show times'.'run date id' = 'run dates'.'id' inner join 'movies' on
'run dates'.'movie id' = 'movies'.'id' inner join 'theatre complexes' on
`run_dates`.`theatre_complex_id` = `theatre_complexes`.`id` inner join `theatres` on
`show times`.`theatre_id` = `theatres`.`id` where `show_times`.`id` = $id
-- theatres
select * from `show_times` inner join `run_dates` on `show_times`.`run_date_id` =
`run_dates`.`id` inner join `theatres` on `run_dates`.`theatre_complex_id` =
'theatres'.'theatre complex id' where 'show times'.'id' = $id
-- destroy -----
delete from `show times` where `id` = $id
-- update -----
update 'show times' set 'theatre id' = $theatre id, 'showing start time' =
$showing_start_time, `num_seats_available` = $num_seats_available, `run_date_id` =
$run_date_id where `id` = $id
-- store -----
insert into 'show times' ('theatre id', 'showing start time', 'num seats avail',
'run date id') values ($theatre id, $showing start time, $num seats avail, $run date id)
-- index -----
select * from `suppliers`
-- edit -----
select * from `suppliers` where `suppliers`.`id` = $id
-- destroy -----
delete from 'suppliers' where 'id' = $id
-- update -----
update `suppliers` set `name` = $name, `phone_num` = $phone_num, `contact_first_name` =
$contact first name, `contact last name` = $contact last name, `apt num` = $apt num,
`street_num` = $street_num, `street_name` = $street_name, `city` = $city, `province` =
$province, `country` = $country, `postal code` = $postal code, where `id` = $id
-- store -----
insert into 'suppliers' ('name', 'phone num', 'contact first name',
`contact_last_name`,`apt_num`, `street_num`, `street_name`, `city`, `province`, `country`,
'postal code') values ($name, $phone num, $contact first name, $contact last name,
$apt_num, $street_num, $street_name, $city, $province, $country, $postal_code)
```



values (\$theatre_num, \$max_num_seats, \$screen_size, \$theatre_complex_id)
## User Controller ###################################
select * from `users` where `users`.`id` = \$id
edit select * from `users` where `users`.`id` = \$id
update  update `users` set `first_name` = \$first_name, `last_name` = \$last_name, `email` = \$email,  `phone_num` = \$phone_num, `credit_card_num` = \$credit_card_num, `credit_card_exp` =  \$credit_card_exp, `apt_num` = \$apt_num, `street_num` = \$street_num, `street_name` =  \$street_name, `city` = \$city, `province` = \$province, `country` = \$country, `postal_code` =  \$postal_code, where `id` = \$id
destroydestroydelete from `users` where `id` = \$id
## Registration (User) Controller ###################################
insert into `users` (`first_name`, `last_name`, `email`, `password`, `phone_num`, `credit_card_num`, `credit_card_exp`, `apt_num`, `street_num`, `street_name`, `city`, `province`, `country`, `postal_code`) values (\$first_name, \$last_name, \$email, \$password, \$phone_num, \$credit_card_num, \$credit_card_exp, \$apt_num, \$street_num, \$street_name, \$city, \$province, \$country, \$postal_code)
## UserManagement Controller ###################################
select * from `users`
createselect * from `roles`
store insert into `users` (`first_name`, `last_name`, `email`, `password`, `phone_num`, `credit_card_num`, `credit_card_exp`, `apt_num`, `street_num`, `street_name`, `city`, `province`, `country`, `postal_code`) values (\$first_name, \$last_name, \$email, \$password, \$phone_num, \$credit_card_num, \$credit_card_exp, \$apt_num, \$street_num, \$street_name, \$city, \$province, \$country, \$postal_code)
edit find user to edit select * from `users` where `users`.`id` = \$id get all roles select * from `roles`

```
-- update -----
-- find user to update
select * from `users` where `users`.`id` = $id
-- update the user
update 'users' set 'first name' = $first name, 'last name' = $last name, 'email' = $email,
`phone_num` = $phone_num, `credit_card_num` = $credit_card_num, `credit_card_exp` =
$credit card exp, `apt num` = $apt num, `street num` = $street num, `street name` =
$street_name, `city` = $city, `province` = $province, `country` = $country, `postal_code` =
$postal_code, where `id` = $id
-- destroy -----
delete from 'users' where 'id' = $id
-- purchase history -----
-- past purchases of specified user
select * from `reservations` inner join `show times` on `reservations`.`showing id` =
`show_times`.`id` inner join `run_dates` on `run_date_id` = `run_dates`.`id` inner join `movies`
on 'movie id' = 'movies'.'id' where 'user id' = $user id and date('showing start time') <
$current time
-- held tickets of specified user
select * from `reservations` inner join `show_times` on `reservations`.`showing_id` =
`show_times`.`id` inner join `run_dates` on `run_date_id` = `run_dates`.`id` inner join `movies`
on 'movie id' = 'movies'.'id' where 'user id' = $user id and date('showing start time') >=
$current time
```