

Logical Constraints:

1. A movie's play date cannot precede its release date.
2. A theater cannot have more than its capacity of movies on the same play date.
3. A customer cannot log more than three views for the same date.
4. A customer cannot have more than five credit cards.

Assumptions:

Attempting anything impossible results in a corresponding dismissible pop-up error message (while remaining on the same screen). The impossible includes:

1. Performing a function with an invalid input in any field. Invalid inputs includes:
 - a. Non-existing Username in Login.
 - b. Wrong Password for existing user in Login.
 - c. Input violating any specified constraint (e.g. Password under 8 characters, nonnumeric credit card number, preexisting Username, 6th movie scheduled on same date for theater of capacity 5).
 - d. Confirm Password does not match Password in Registration.
 - e. First field exceeds second field in paired fields such as # City Covered in Manage Company or Movie Release Date in Theater Overview.
2. Performing a function with any required field blank (or unselected in case of dropdown field). Required fields include:
 - a. All fields in: Login, Create Theater, Create Movie, Schedule Movie.
 - b. All fields on all Registration screens when registering (except the field for an additional credit card number when a customer has already added one credit card number).
 - c. Credit Card # field on all Customer Registration screens when adding a credit card number.
 - d. A Username must be selected when approving or declining in Manage User.
 - e. A Name (of Company) must be selected when navigating to Company Detail.
 - f. If either of a paired field's members is filled (e.g. # City Covered in Manage Company), the other one must be too.
 - g. Card Number to log View.
 - h. Visit Date to log Visit.
3. Navigation to Theater Overview by a Manager that does not Manage any Theater.
4. Anything that throws an SQL error we did not account for; this prompts a generic pop-up similar to: 'We could not complete the requested action. Error message: [the actual error message from SQL].'

An Admin's Status is always 'Approved.'

After any user registers, they are redirected to the Login screen with a pop-up message similar to: 'You are registered for Atlanta Movie database. Your status is: [User's Status]. Pending users will be reviewed within 3 business days.'

This same pop-up will be shown if a Pending or Denied user attempts to log in.

It is possible to perform a redundant or pointless action.

E.g. Approving an already approved user will simply reload the screen; searching a non-existing username in Manage User will turn up an empty table; filtering with no fields filled on Manage Company will display all companies.

ID attributes auto-generate upon the creation of the entity or relationship.

E.g. Movieid, Playid. These will be the lowest unclaimed positive integer or some other simple method to make it easier to query the database about the types of entity with no other simple primary key. Incidentally, this also makes Theater a strong entity.