Project Phase 3 and Assumptions
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In completing this project we consulted…

- Gehrke, Johannes, and Raghu Ramakrishnan. *Database management systems third edition*. McGraw-Hill, 2003.
- Bakalov Petko's CS 166 Database Management Systems Video Lectures and Lecture Slides. University of California – Riverside.
- Qizhong Mao's CS 166 Database Management Systems Video Lab, Lab Assignments & Solutions, and Lab Notes. University of California – Riverside.

Of the code submitted, we imported an email validator form an online source:

```
  // Regex email validation taken from:
  // https://howtodoinjava.com/regex/java-regex-validate-email-address/
```

All other code in the project was original.

The link to our video can be found here: https://youtu.be/9iClN35lkz0.

See next page for Project Phase 3 Assumptions.

Project Phase 1 Assumptions

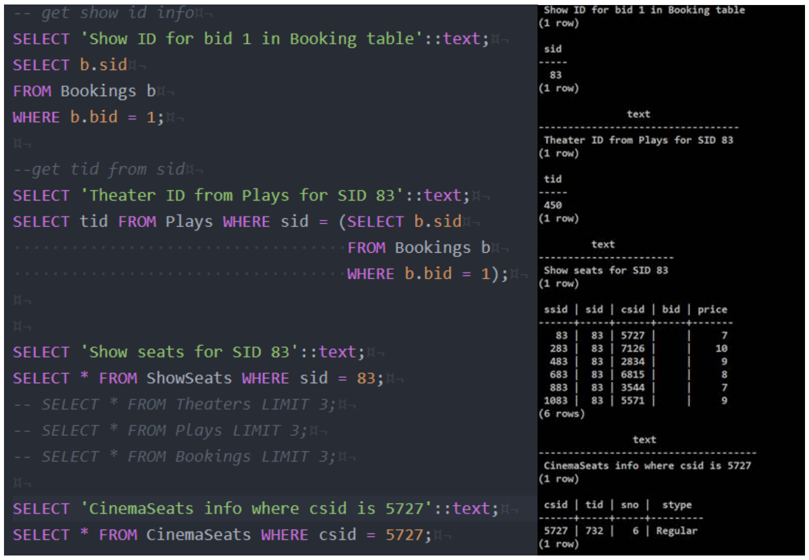
<u>Overall Assumptions</u>

- We made changes to the main class by adding an email validator (as described on the cover sheet), we assumed payments would be ints (like the sample data), and we added five sequences to track primary keys. We also made an additional class method specifically for nextval() calls to the database.

- We assume the data in the database is correct we are running our system. This is technically not true for several reasons:

    - The ShowSeats table has no bids. This is critical for determining the show seats to remove for a cancelled booking/cancelled show.

    - We can infer that entries in the ShowSeats table are "booked seats" and entries in the "Cinema seats" table are all seats in a theater. However there is no delta of the two because the data does not match up based on theater. For example (screenshots below):
        - When we look at booking id 1, this leads to show id (sid) 83.
        - Show id 83 leads to theater id 450.
        - The show seats for SID 83 give us a cinema seat #5727.
        - If I look up cinema seat id 5727 in the Cinema Seats table, I get theater ID 732.



```
-- get show id info
SELECT 'Show ID for bid 1 in Booking table'::text;
SELECT b.sid
FROM Bookings b
WHERE b.bid = 1;

--get tid from sid
SELECT 'Theater ID from Plays for SID 83'::text;
SELECT tid FROM Plays WHERE sid = (SELECT b.sid
                                   FROM Bookings b
                                   WHERE b.bid = 1);


SELECT 'Show seats for SID 83'::text;
SELECT * FROM ShowSeats WHERE sid = 83;
-- SELECT * FROM Theaters LIMIT 3;
-- SELECT * FROM Plays LIMIT 3;
-- SELECT * FROM Bookings LIMIT 3;

SELECT 'CinemaSeats info where csid is 5727'::text;
SELECT * FROM CinemaSeats WHERE csid = 5727;
```

```
 Show ID for bid 1 in Booking table
(1 row)

 sid
-----
  83
(1 row)

               text
-----------------------------------
 Theater ID from Plays for SID 83
(1 row)

 tid
-----
 450
(1 row)

         text
-----------------------
 Show seats for SID 83
(1 row)

 ssid | sid | csid | bid | price
------+-----+------+-----+-------
   83 |  83 | 5727 |     |     7
  283 |  83 | 7126 |     |    10
  483 |  83 | 2834 |     |     9
  683 |  83 | 6815 |     |     8
  883 |  83 | 3544 |     |     7
 1083 |  83 | 5571 |     |     9
(6 rows)

                text
-------------------------------------
 CinemaSeats info where csid is 5727
(1 row)

 csid | tid | sno |  stype
------+-----+-----+---------
 5727 | 732 |   6 | Regular
(1 row)
```

Regardless, all data from our system is loaded correctly.

2. <u>Add Booking</u>

Because it was not specified, we did not add payment details when a booking was added. This harkens back to the original schema discussion (all payments have a booking but not all bookings have a payment). If a booking is listed as pending, the seat price is loaded as $0 in ShowSeats.

5. <u>Change Seats Reserved for a Booking</u>

If a booking is selected for new seats, all seats must be changed.

6. <u>Remove a Payment</u>

As stated before, ShowSeats need bids to be cleared of removed payments. We do not "infer" which seats to clear, and instead use the payment BID to remove the ShowSeats. This does nothing with the data provided, but if they did have BIDs they would be removed.

8. <u>Remove Shows on a Given Date</u>

We do not delete shows, we only delete the theaters specific to the cinema given from Plays (and everything else specified). It would not be proper to delete shows from the Shows table as other cinemas could use the same show.