# DBMS-Mini Project MOVIE BOOKING MANAGEMENT SYSTEM

Submitted By: ADITI SOORI PES1UG20CS017 V Semester Section 'A'

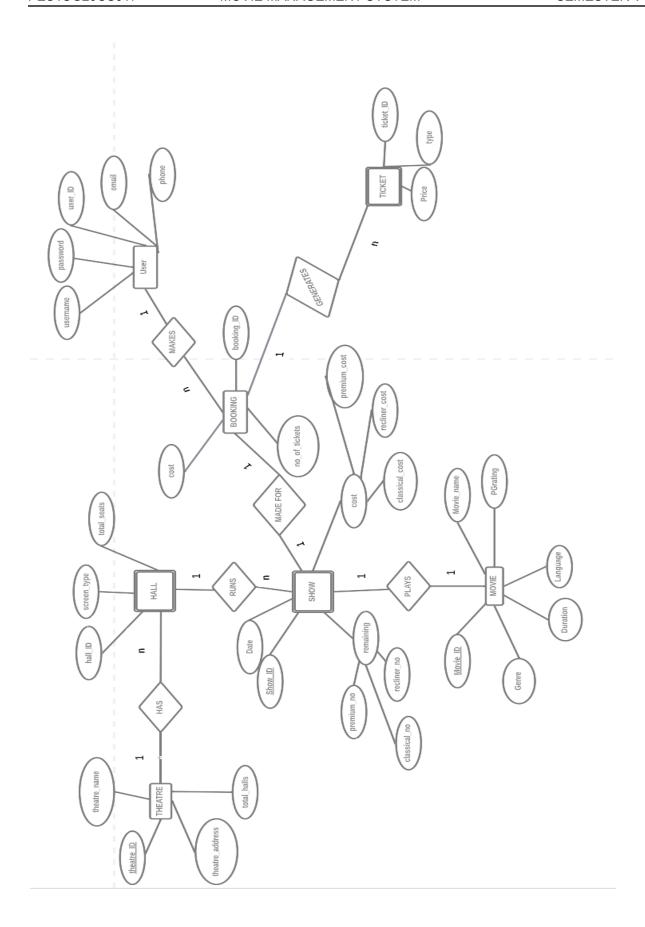
#### **ABSTRACT**

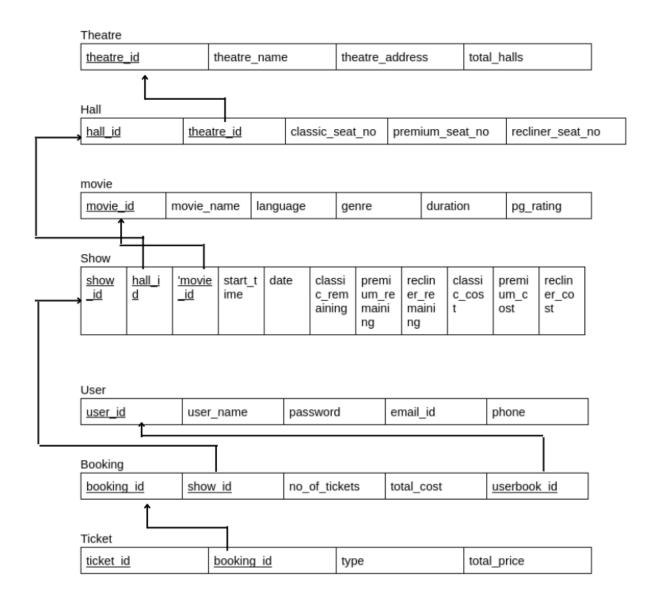
To design, and implement a Database to aid in comprehensively managing all aspects of a theatre. This system deals with a single branch of a theatre. It keeps track of the various halls, currently showing movies, show timings, booked tickets, and price listings in the theatre as well as the associated attributes. The system allows a user to book tickets for a given show, and for a manager/admin to add movies and shows to the database.

The Movie Booking Management System is created using Streamlit for the frontend and user interface and MySQL is used for the backend and storing of data. It allows basic CRUD operations through the

frontend which includes Adding, Viewing, Editing and Removal of tasks. It also supports login and authentication for both users and the admin.

PES1UG20CS017	MOVIE MANAGEMENT SYSTEM	SEMESTER V
ER DIAGRAM AND RELATIONAL SCHEMA		





## DDL Statements – Building the Database AND Populating the Database

```
drop database movie booking system;
create database movie_booking_system;
use movie booking system;
SET SQL MODE = "NO AUTO VALUE ON ZERO";
START TRANSACTION;
SET time zone = "+00:00";
-- Database: `Movie Management System`
 - Table structure for table `theatre`
CREATE TABLE `theatre` (
 `theatre id` varchar(10) NOT NULL,
 `theatre name` varchar(50) NOT NULL,
 `theatre address` varchar(75) NOT NULL,
 `total_halls` int(4) NOT NULL,
 Primary Key(`theatre id`)
 ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
 - Dumping data for table `theatre`
INSERT INTO `theatre` (`theatre_id`, `theatre_name`, `theatre_address`,
`total_halls`) VALUES
('T01', 'PVR Cinemas', 'Koramangala, Bangalore', 15),
('T02', 'INOX Movies', 'Jayanagar, Bangalore',25),
```

```
('T03', 'Cinepolis', 'Banaswadi, Bangalore',10),
('T04', 'IMAX Cinemas', 'Malleshwaram, Bangalore',20);
-- Table structure for table `hall`
CREATE TABLE `hall` (
 `hall id` varchar(10) NOT NULL,
 `theatre id` varchar(10) NOT NULL,
 `classic seat no` int(11) NOT NULL,
 `premium seat no` int(11) NOT NULL,
 `recliner seat no` int(11) NOT NULL,
 Primary Key(`hall id`),
 Foreign Key(`theatre id`) REFERENCES `theatre`(`theatre id`) ON DELETE
CASCADE ON UPDATE CASCADE
 ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `hall`
INSERT INTO `hall` (`hall_id`, `theatre_id`, `classic_seat_no`,
`premium_seat_no`, `recliner_seat_no`) VALUES
('T010','T03',80,20,10),
('T014','T01',60,10,15),
('T020','T04',75,35,5),
('T022','T02',60,30,15),
('T006', 'T03', 69, 18, 12),
('T023','T02',78,20,10),
('T015','T01',92,12,8),
('T012','T04',56,30,15),
('T008','T03',43,40,16),
('T003','T04',81,20,12),
('T021','T02',72,15,20);
-- Table structure for table `movie`
CREATE TABLE `movie` (
```

```
movie id` varchar(10) NOT NULL,
 `movie name` varchar(100) NOT NULL,
 `language` varchar(50) NOT NULL,
 `genre` varchar(20),
 `duration` varchar(45) NOT NULL,
  `pg_rating` varchar(5) NOT NULL,
   Primary Key(`movie id`)
 ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `movie`
INSERT INTO `movie`
(`movie id`,`movie name`,`language`,`genre`,`duration`,`pg rating`) VALUES
('001', 'Hichki', 'Hindi', 'Drama/Comedy', '2 hrs 15 mins', 'U/A'),
('002', 'Pacific Rim Uprising', 'English', 'Fantasy/SciFi', '1 hrs 55
mins','U/A'),
('003', 'Strangers : Prey at night', 'English', 'Horror', '3 hrs 10 mins',
'U/A'),
('004', 'Tomb Raider', 'English', 'Fantasy/Action', '3 hrs 15 mins', 'A'),
('005', 'Midnight Sun', 'English', 'Romance', '2 hrs 55 mins', 'R'),
('006', 'Peter Rabbit', 'English', 'Fantasy/Adventure', '2 hrs 35
mins','U/A'),
('007', 'Black Panther', 'English', 'Fantasy/SciFi', '2 hrs 15 mins', 'U/A'),
('008', 'Maze Runner: The Death Cure', 'English', 'Fantasy/SciFi', '2 hrs 45
mins','U/A'),
('009', 'Insidious: The Last Key', 'English', 'Horror', '2 hrs 20
mins','U/A'),
('010', 'Blackmail','Hindi', 'Comedy','1 hrs 55 mins','U/A'),
('011', 'Parmanu: The Story of Pokhran', 'Hindi', 'Drama/Thriller', '3 hrs
10 mins','U/A'),
('012', '3 Storeys', 'Hindi', 'Drama', '1 hrs 45 mins', 'U/A'),
('013', 'Rajaratha','Kannada', 'Comedy','2 hrs 45 mins','U/A'),
('014', 'Yogi Duniya', 'Kannada', 'Drama/Thriller', '3 hrs 10 mins', 'U/A'),
('015', 'Kurukshetra', 'Kannada', 'Fantasy/History', '1 hrs 45 mins', 'U/A'),
('016', 'Kantara','Kannada','Drama/Thriller','2 hrs 30 mins','U/A');
-- Table structure for table `show`
```

```
CREATE TABLE `show`
 `show id` varchar(10) NOT NULL,
 `hall id` varchar(10) NOT NULL,
 `movie id` varchar(10) NOT NULL,
 `start time` time DEFAULT NULL,
 `date` date DEFAULT NULL,
 `classic_remaining` int NOT NULL CHECK (`classic_remaining` >= 0),
 `premium remaining` int NOT NULL CHECK (`premium remaining` >= 0),
 `recliner remaining` int NOT NULL CHECK (`recliner remaining` >= 0),
 `classic cost` int NOT NULL,
 `premium cost` int NOT NULL,
 `recliner cost` int NOT NULL,
  Primary Key(`show id`),
 Foreign Key('hall id') REFERENCES 'hall'('hall id') ON DELETE CASCADE ON
UPDATE CASCADE,
 Foreign Key('movie id') REFERENCES 'movie'('movie id') ON DELETE CASCADE
ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `show`
INSERT INTO `show` VALUES
('SHT0140002', 'T014', '015','04:20:00 ', '2022-11-05', 4, 5,12, 300,
450,575),
('SHT0210002', 'T021', '016','04:20:00', '2022-11-08', 22, 8,10, 395,
425,500),
('SHT0220002', 'T022', '001','04:20:00', '2022-11-15', 8, 5,3, 300,
375,450),
('SHT0230002', 'T023', '002','04:20:00 ', '2022-11-25', 40,16,8,295,
355,415),
('SHT0240002', 'T020', '003','04:20:00 ', '2022-11-05', 20,10,2, 395,
325,495),
('SHT0310002', 'T008', '004', '04:20:00 ', '2022-11-21', 35,10,5, 325,
350,400),
('SHT0320002', 'T012', '005', '04:20:00', '2022-11-12', 10,8,2, 315,
375,425),
('SHT0330002', 'T003', '006','04:20:00 ', '2022-11-11', 21,15,1, 425,
450,500),
```

```
('SHT0110003', 'T010', '007','07:30:00 ', '2022-11-01', 3,12,8, 400,475,
550),
('SHT0120003', 'T006', '008', '07:30:00', '2022-11-04', 17,6,8, 275,
315,400);
-- Table structure for table `user`
CREATE TABLE `user` (
 `user id` varchar(15) NOT NULL,
 `user name` varchar(100) NOT NULL,
 `email id` varchar(50) NOT NULL,
 `phone` varchar(10) NOT NULL,
 Primary Key(`user id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
- Dumping data for table `user`
INSERT INTO `user` VALUES
('100', 'Amit', 'amitsinhT04@gmail.com', '9846273634'),
('101', 'Raghav', 'seth.raghav987@gmail.com','7845279834'),
('102', 'Anjali', 'anjali23g@gmail.com', '8849273345'),
('103', 'Joy', 'jmathew.123@gmail.com', '9000567890'),
('104', 'Sudha', 'sudha_sunil07@gmail.com', '8874323461'),
('105', 'Ajay', 'kumarajayv56@gmail.com', '9078985643'),
('106', 'Vikram', 'jvikram.89@gmail.com', '7750912345'),
('107', 'Komal', 'komal.agarwal87@gmail.com', '9345687654'),
('108', 'Maitri', 'maitrishahj1@gmail.com', '9922345016'),
('109', 'Bhavya', 'bhavyashastri@gmail.com', '8567409098'),
('110', 'Preeti', 'preeti.jain@gmail.com', '7765433211'),
('111', 'Shreya', 'rathod shreya@gmail.com','9800215673'),
('112', 'Aditya', 'adityarajesh2902@gmail.com','9108996762');
-- Table structure for table `booking`
CREATE TABLE `booking` (
```

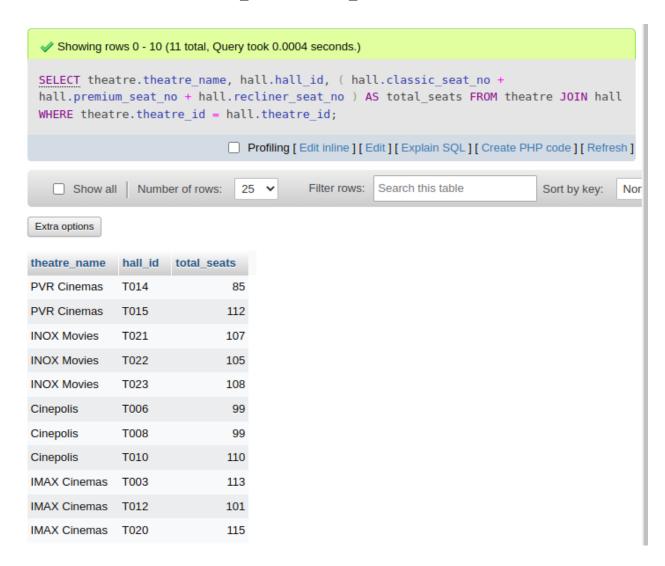
```
booking id` varchar(10) NOT NULL,
 `show_id` varchar(10) NOT NULL,
 `no of tickets` int(50) NOT NULL,
 `userbook id` varchar(10) NOT NULL,
 Foreign Key(`userbook_id`) REFERENCES `user`(`user_id`) ON DELETE
CASCADE ON UPDATE CASCADE,
 Foreign Key('show id') REFERENCES 'show'('show id') ON DELETE CASCADE ON
UPDATE CASCADE,
  Primary Key(`booking id`)
 ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `booking`
INSERT INTO `booking` VALUES
('B001','SHT0140002',2,'100'),
('B003','SHT0220002',1,'105'),
('B004','SHT0310002',3,'102'),
('B005','SHT0330002',2,'103'),
('B006','SHT0110003',4,'101'),
('B007','SHT0220002',1,'106'),
('B008','SHT0120003',3,'107'),
('B009', 'SHT0110003', 4, '1111'),
('B010','SHT0240002',2,'112'),
('B011','SHT0140002',1,'110');
- Table structure for table `ticket`
CREATE TABLE `ticket` (
 `ticket id` varchar(10) NOT NULL,
 `booking id` varchar(10) NOT NULL,
`type` varchar(50) NOT NULL,
 `total price` int NOT NULL,
 Primary Key(`ticket_id`),
 Foreign Key(`booking id`) REFERENCES `booking`(`booking id`) ON DELETE
CASCADE ON UPDATE CASCADE
 ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `ticket`
```

```
INSERT INTO `ticket` VALUES
('T100','B001','classic',300),
('T102','B003','premium',350),
('T103','B004','recliner',315),
('T104','B005','classic',275),
('T105','B006','classic',395),
('T106','B007','premium',315),
('T107','B008','premium',325),
('T108','B009','premium',450),
('T109','B010','recliner',495),
('T110','B004','recliner',500);
```

### **JOIN QUERIES**

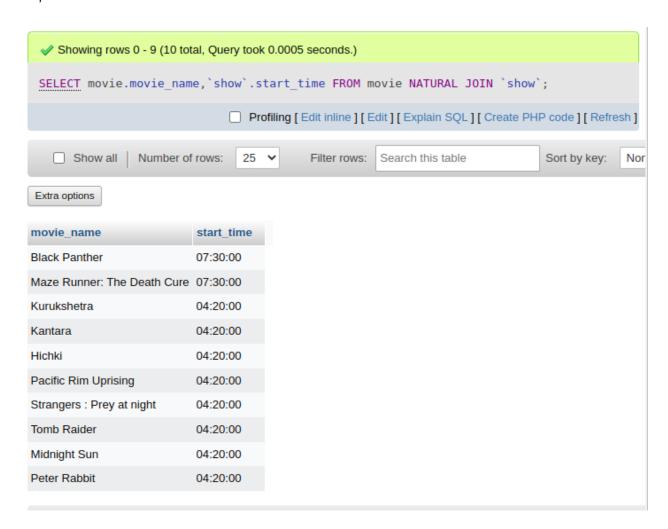
### 1)RETRIEVE THEATRE NAMES WITH THE CORRESPONDING HALL ID'S AND THE TOTAL NUMBER OF SEATS IN THE HALL

```
SELECT
  theatre.theatre_name,
  hall.hall_id,
  (
     hall.classic_seat_no + hall.premium_seat_no + hall.recliner_seat_no
  ) AS total_seats
FROM
  theatre
JOIN hall WHERE theatre.theatre_id = hall.theatre_id;
```



#### 2) DISPLAY THE NAME OF THE MOVIE AND THE TIME IT STARTS

```
SELECT
movie.movie_name,`show`.start_time
FROM
movie
NATURAL JOIN `show`
:
```



### 3)RETRIEVE SHOW ID'S OF ONLY THOSE SHOWS WHERE THERE ARE SEATS REMAINING TO BE BOOKED

#### **SELECT**

**FROM** 

total

NATURAL JOIN booked WHERE total\_remaining < total\_seats



#### 4) DISPLAY NAMES OF USERS WHO HAVE PURCHASED EXACTLY ONE TICKET

**SELECT** user\_name **FROM** `user` JOIN booking WHERE no\_of\_tickets = 1 AND `user`.user\_id = `booking`.`userbook\_id`; Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.) SELECT user\_name FROM `user` JOIN booking WHERE no\_of\_tickets = 1 AND `user`.user\_id = `booking`.`userbook id`; Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh] Show all Number of rows: 25 🕶 Filter rows: Search this table Sort by key: None Extra options user name Ajay Vikram Preeti

### **AGGREGATE FUNCTIONS**

#### 1) CALCULATE THE NUMBER OF TICKETS SOLD WHICH ARE OF THE TYPE 'PREMIUM'

```
SELECT
COUNT(ticket_id)

FROM
ticket
WHERE TYPE
= 'premium';

Your SQL query has been executed successfully.

SELECT COUNT(ticket_id) FROM ticket WHERE TYPE = 'premium';

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

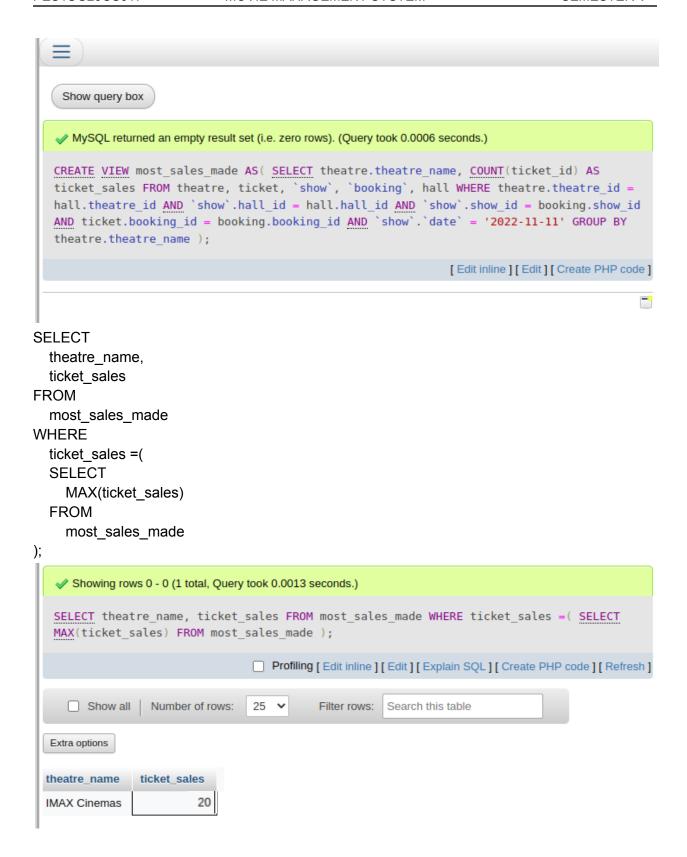
Extra options

COUNT(ticket_id)

4
```

### 2)DISPLAY THE NAME OF THE THEATER WHICH MADE THE MOST NUMBER OF SALES AND ALSO CALCULATE THE TOTAL SALES MADE

```
CREATE VIEW most_sales_made AS(
  SELECT
    theatre.theatre_name,
    COUNT(ticket_id) AS ticket_sales
  FROM
    theatre.
    ticket,
    `show`,
    'booking',
    hall
  WHERE
    theatre.theatre id = hall.theatre id AND 'show'.hall id = hall.hall id AND 'show'.show id
= booking.show_id AND ticket.booking_id = booking.booking_id AND `show`.`date` =
'2022-11-11'
  GROUP BY
    theatre.theatre_name
);
```



#### 3)CALCULATE THE AVERAGE PRICE OF TICKETS

SELECT AVG(total\_price) FROM ticket;



### 4)FIND THE NUMBER OF MOVIES WHICH ARE IN ENGLISH

SELECT
COUNT(\*)
FROM
movie
WHERE
movie.language = 'English'



### 5)DISPLAY BLOCKBUSTER MOVIES OF THE DAY WHICH IS THE MOVIES WHICH HAVE THE HIGHEST BOOKINGS IN A DAY

```
CREATE VIEW blockbuster_movie AS(
    SELECT
        (m.movie_name) AS name_of_movie,
        COUNT(b.booking_id) AS no_of_bookings
FROM
        booking AS b,
        'show` AS s,
        movie AS m
WHERE
        s.show_id = b.show_id AND m.movie_id = s.movie_id
GROUP BY
        m.movie_name
);
```

```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

CREATE VIEW blockbuster_movie AS( SELECT (m.movie_name) AS name_of_movie,
COUNT(b.booking_id) AS no_of_bookings FROM booking AS b, `show` AS s, movie AS m WHERE
s.show_id = b.show_id AND m.movie_id = s.movie_id GROUP BY m.movie_name );

[Edit inline][Edit][Create PHP code]
```

```
SELECT

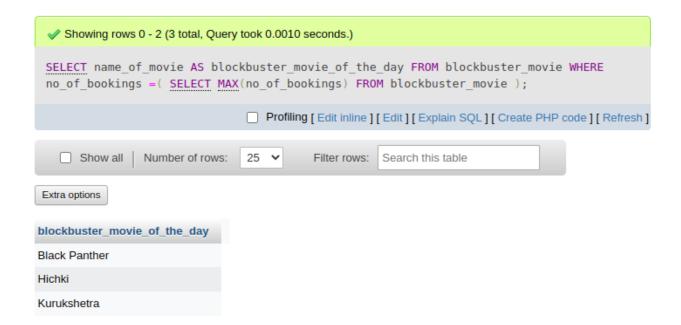
name_of_movie AS blockbuster_movie_of_the_day
FROM

blockbuster_movie
WHERE

no_of_bookings =(
SELECT

MAX(no_of_bookings)
FROM

blockbuster_movie
);
```

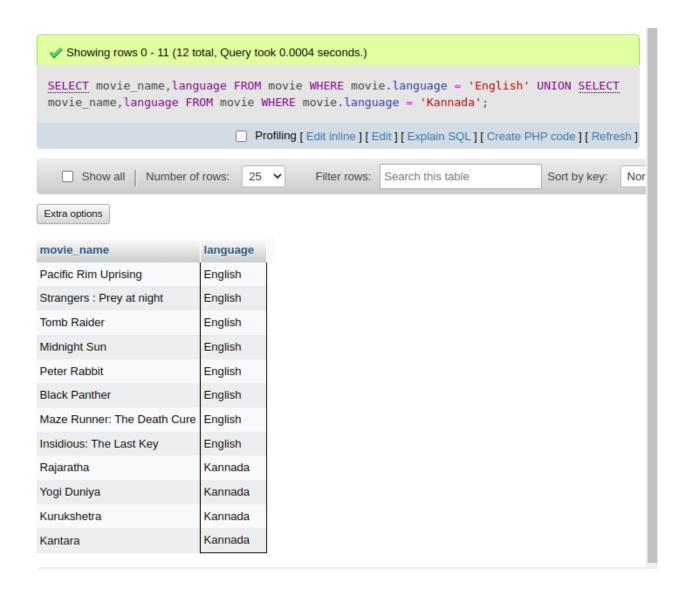


UE20CS301 – Database Management System

### **SET OPERATIONS**

### 1)LIST OUT ALL THE MOVIES WHICH ARE IN ENGLISH AND KANNADA

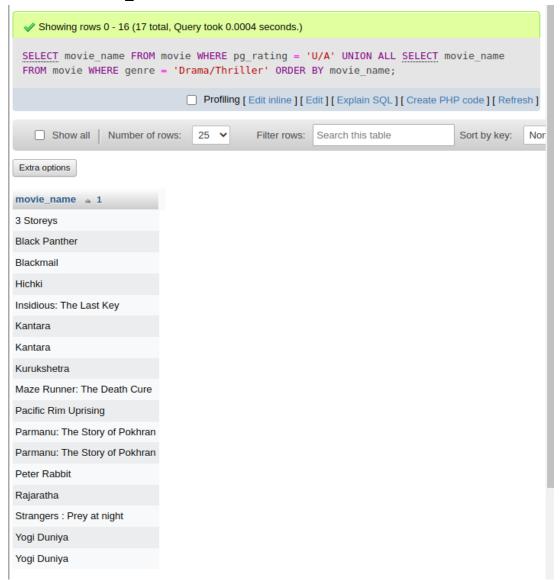
```
SELECT
movie_name,language
FROM
movie
WHERE
movie.language = 'English'
UNION
SELECT
movie_name,language
FROM
movie
WHERE
movie.language = 'Kannada';
```



### 2)LIST THE MOVIES WHICH BELONG TO THE GENRE OF DRAMA/THRILLER OR HAVE A PG\_RATING OF U/A

```
SELECT
movie_name
FROM
movie
WHERE
pg_rating = 'U/A'
UNION ALL
SELECT
movie_name
FROM
movie
WHERE
genre = 'Drama/Thriller'
```

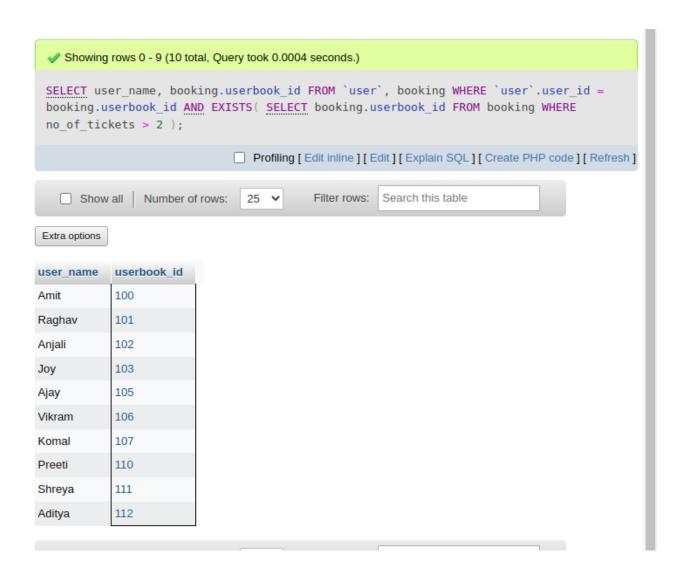
#### ORDER BY movie\_name;



### 3)DISPLAY THE NAMES OF USERS AND THEIR USER ID WHO HAVE PURCHASED MORE THAN 2 TICKETS

```
SELECT
user_name,
booking.userbook_id
FROM
`user`,
booking
WHERE
`user`.user_id = booking.userbook_id AND EXISTS(
SELECT
```

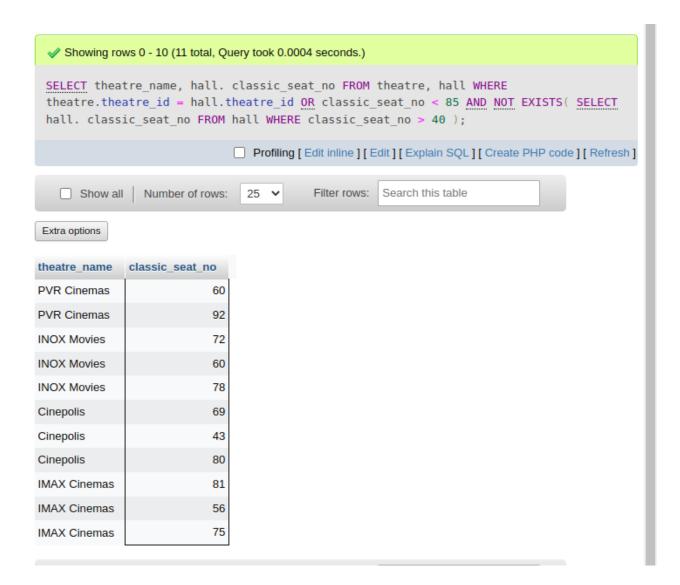
```
booking.userbook_id
FROM
booking
WHERE
no_of_tickets > 2
);
```



### 4)FIND ALL THE THEATRE NAMES WHICH HAVE NUMBER OF CLASSIC SEATS BETWEEN 85 AND 40

```
SELECT
theatre_name,
hall. classic_seat_no
FROM
```

```
theatre,
hall
WHERE
theatre.theatre_id = hall.theatre_id OR classic_seat_no < 85 AND NOT EXISTS(
SELECT
hall. classic_seat_no
FROM
hall
WHERE
classic_seat_no > 40
);
```



### **FUNCTIONS AND PROCEDURES**

### 1)PROCEDURE: CREATE A STORED PROCEDURE TO SELECT A MOVIE USING THE USER SPECIFIED **LANGUAGE DELIMITER** \$\$ CREATE PROCEDURE select\_movie\_using\_language(IN LANGUAGE VARCHAR(10)) **BEGIN SELECT FROM** movie WHERE movie.language = LANGUAGE; END \$\$ **DELIMITER** Show query box MySQL returned an empty result set (i.e. zero rows). (Query took 0.0015 seconds.)

CREATE PROCEDURE select\_movie\_using\_language(IN LANGUAGE VARCHAR(10)) BEGIN SELECT \*

FROM movie WHERE movie.language = LANGUAGE; END;

[ Edit inline ] [ Edit ] [ Create PHP code ]



```
CREATE VIEW movie_fan AS(
    SELECT DISTINCT
    u.user_name,
    COUNT(b.booking_id) AS no_of_bookings
FROM
    `user` AS u,
    booking AS b
    WHERE
    u.user_id = b.userbook_id
    GROUP BY
    u.user_name
);
```

Show query box

```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0012 seconds.)

CREATE VIEW movie_fan AS( SELECT DISTINCT u.user_name, COUNT(b.booking_id) AS
no_of_bookings FROM `user` AS u, booking AS b WHERE u.user_id = b.userbook_id GROUP BY
u.user_name );

[Edit inline][Edit][Create PHP code]
```



### 2)FUNCTION WRITE A FUNCTION THAT DISPLAYS THE TOTAL NUMBER OF SEATS BOOKED FOR A GIVEN SHOW

```
DELIMITER $$
CREATE FUNCTION totalseatsbooked
(show_id varchar(10))
RETURNS INT(10)
BEGIN

DECLARE seats INT(10);
select (total.total_seats - booked.total_remaining) into seats
from total,booked
where show_id=show_id;
RETURN seats;
END
$$
DELIMITER;
```

### TRIGGERS AND CURSORS

```
1)CURSOR
CREATE A STORED PROCEDURE THAT CREATES A PHONE NUMBER LIST OF ALL
USERS IN THE USER DATABASE
DELIMITER $$
CREATE PROCEDURE createPhoneList (
      INOUT phoneList varchar(4000)
)
BEGIN
      DECLARE finished INTEGER DEFAULT 0;
      DECLARE phoneno varchar(100) DEFAULT "";
      -- declare cursor for user phone
      DECIARE cur_phone
            CURSOR FOR
                  SELECT phone FROM 'user';
      -- declare NOT FOUND handler
      DECLARE CONTINUE HANDLER
    FOR NOT FOUND SET finished = 1;
      OPEN cur_phone;
      getPhone: LOOP
            FETCH cur_phone INTO phoneno;
            IF finished = 1 THEN
                  LEAVE getPhone;
            END IF;
            -- build phone list
            SET phoneList = CONCAT(phoneno,";",phoneList);
      END LOOP getPhone;
      CLOSE cur_phone;
END$$
DELIMITER;
```

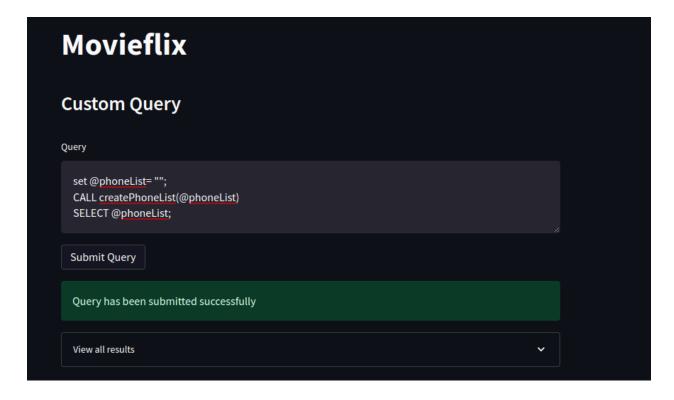
```
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0273 seconds.)

CREATE PROCEDURE createPhoneList ( INOUT phoneList varchar(4000) ) BEGIN DECLARE finished INTEGER DEFAULT 0; DECLARE phoneno varchar(100) DEFAULT ""; -- declare cursor for user phone DECLARE cur_phone CURSOR FOR SELECT phone FROM `user`; -- declare NOT FOUND handler DECLARE CONTINUE HANDLER FOR NOT FOUND SET finished = 1;

OPEN cur_phone; getPhone: LOOP FETCH cur_phone INTO phoneno; IF finished = 1 THEN LEAVE getPhone; END IF; -- build phone list SET phoneList = 

[Edit inline][Edit][Create PHP code]
```

set @phoneList= "";
CALL createPhoneList(@phoneList)
SELECT @phoneList;



#### 1)TRIGGER

### WRITE A TRIGGER THAT ALERTS WHEN THE SEATS ARE FULL AND THERE ARE NONE REMAINING FOR A SHOW

```
create view total as select (classic_seat_no +premium_seat_no+recliner_seat_no) as total_seats, show_id from hall, `show `where `show`.hall_id = hall.hall_id; create view booked as select (premium_remaining + classic_remaining+recliner_remaining) as total_remaining, show_id from `show`;
```

```
DELIMITER $$
CREATE TRIGGER seats full
                               BEFORE INSERT
ON booked
FOR EACH ROW
BEGIN
  DECLARE error_msg VARCHAR(255);
  DECLARE seat
  INT:
  SET error_msg = (" SEATS ARE FULL");
  SET seat = booked.total remaining;
  IF seat=0
  THEN
    SIGNAL SQLSTATE '45000'
    SET MESSAGE_TEXT = error_msg;
  END IF;
END $$
DELIMITER;
```

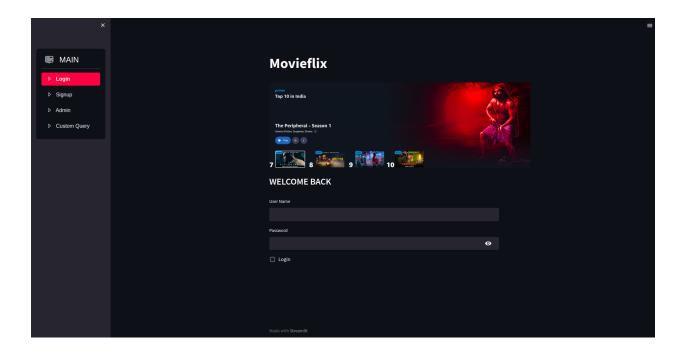
### **DEVELOPING THE FRONTEND**

```
aditisoori@aditis-laptop:~/movie_management_system$ streamlit run /home/aditisoori
/movie_management_system/app.py

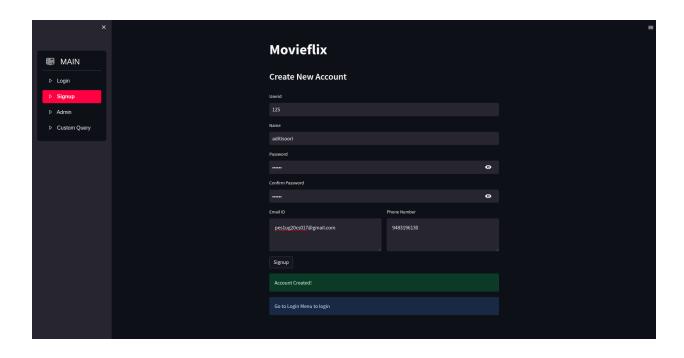
You can now view your Streamlit app in your browser.

Local URL: http://localhost:8501
Network URL: http://172.16.21.168:8501
```

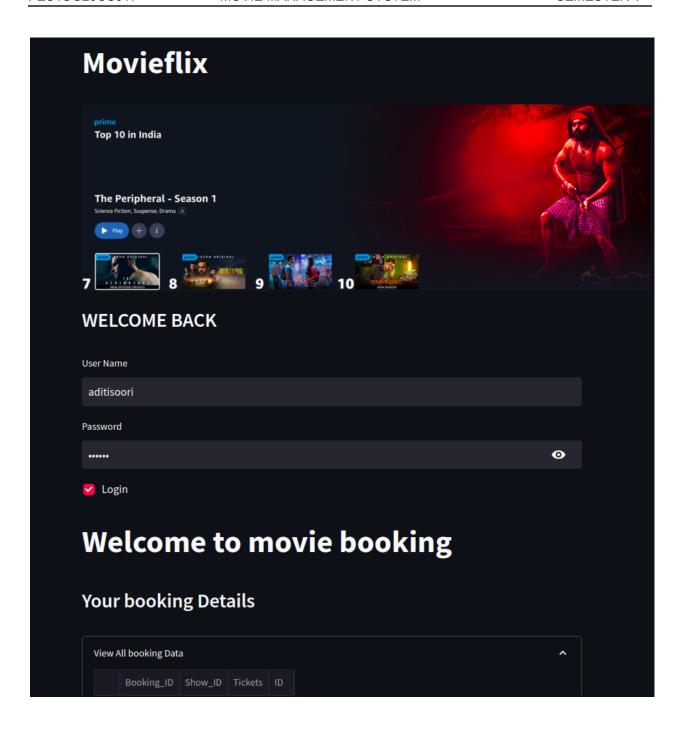
#### **MAIN PAGE**



### SIGNUP PAGE -CREATING A NEW USER



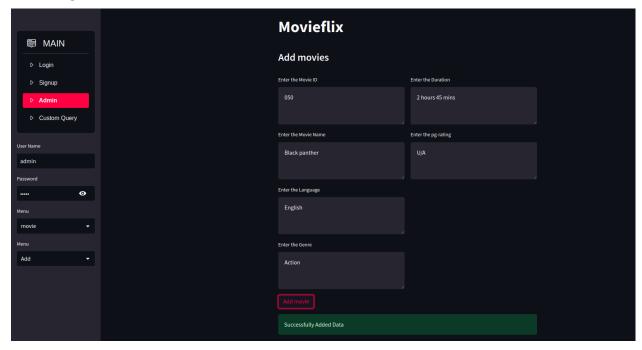
### **LOGIN PAGE**



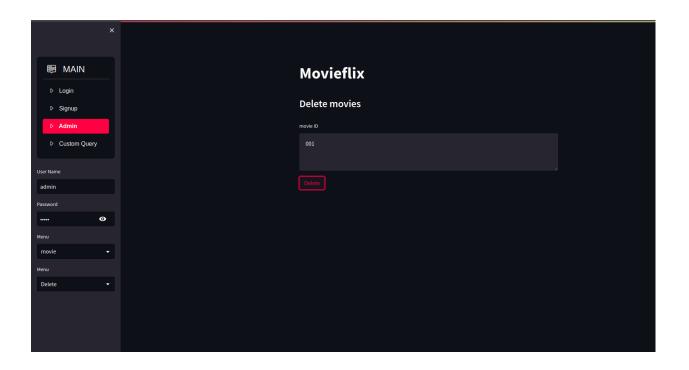
### **ADMIN LOGIN**



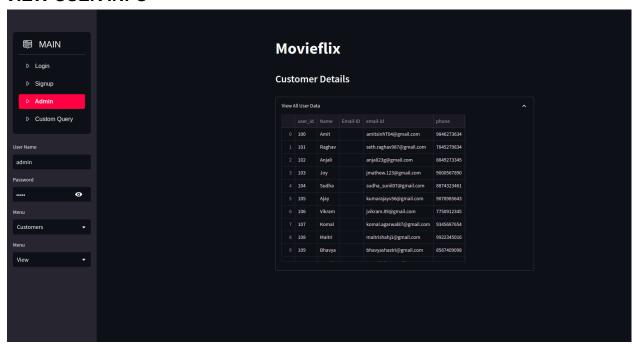
### **ADD MOVIE**



### **DELETE MOVIE**



#### **VIEW USER INFO**



### **CUSTOM QUERY PAGE**

