Final Report
(Movie Ticket Booking System)

Course Code: CS254 **Course Title:** DBMS Lab

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Academic Year: 2020-21 **Course Instructor:**Dr. Annappa B and Mr. Sharath Yaji

Team Members:

1. Rakshit P, CS147, 9606163623, rakshit.191cs147@nitk.edu.in.

2. Anirudh Achal, CS108, 9108529223, anirudhachal.191cs108@nitk.edu.in

3. Nanda Kishore KH, CS140, 8197439914, nandakishore.191cs140@nitk.edu.in.

1 Abstract

Movie Ticket Booking System is a computerized solution for theatre setups, which will automate the process of Ticket Sale and Customer Bookings. This application will allow users to browse movies filtering them based on location, price, rating, genre, timing and age. The home page will display movies based on filters selected by the user. Once a movie is selected, the users will be redirected to a page dedicated to the selected movie where booking details, timings, movie rating and locations will be displayed. On selecting booking options, the user will be directed to a booking page. Users can choose their preferred seats and show based on availability and preference and make reservations by submitting a form. Once a user has watched a movie, he/she can mark it as completed, rate the movie based on his/her experience and give feedback. This feedback will be reflected in the rating of the respective movie. Users must login to the application after creating an account for themselves in order to make a booking. Each user profile will maintain a history of all previous bookings of the user logged in. Also, this application will allow admins to have a separate login through which they will be able to add, modify and delete movies from the application. Users will be able to change passwords based on their need and also reset it in case it is forgotten. Through this project we aim at implementing various Database Management System concepts like transaction management and Database security while improving our software development skills.

2 Introduction

Movie Ticket Booking Systems are used all around the world for booking and reserving movies online. These applications and websites provide customers with facilities to view movie availability online and make reservations with just a few steps.

Since movie ticket booking systems are used at such a large scale and have a lot of practical application as well as value, we picked this for our project. Our movie ticket management system, implemented in Django + MySQL allows users to easily make movie reservations. When a user first visits the website they are redirected to a home dashboard where all the different movies that are currently in the database are listed along with some key information regarding the movie including a brief description, PG rating, duration, genre etc. Users have the option to filter movies based on their personal preferences and choice. This can be done using the filter sidebar which allows users to filter over various different attributes including but not limited to PG rating, duration, language and genre. Users can also search for a particular movie using the search bar located at the top of the page.

In order to make a booking all users must first login to their personal account. If the user does not have an account, they must make one before they can proceed to make a booking. Once a user has logged in, they can select the movie that they wish to make a reservation on. This will redirect the user to a movie page which contains all details regarding the chosen movie. Next the user must click on 'Book Now' in order to make a reservation. Users are now redirected to a Booking page where the user can reserve a selected amount of seats for a particular show. Once the booking is completed successfully, the reservation will be displayed on the users profile.

The admin has the option to add and delete movies. The users can also reset their login password and change their profile picture in the website. The users also have the option of providing a feedback on the website experience through a feedback forum. This project replicates the working of a real life movie ticket booking system.

3 ER Diagram

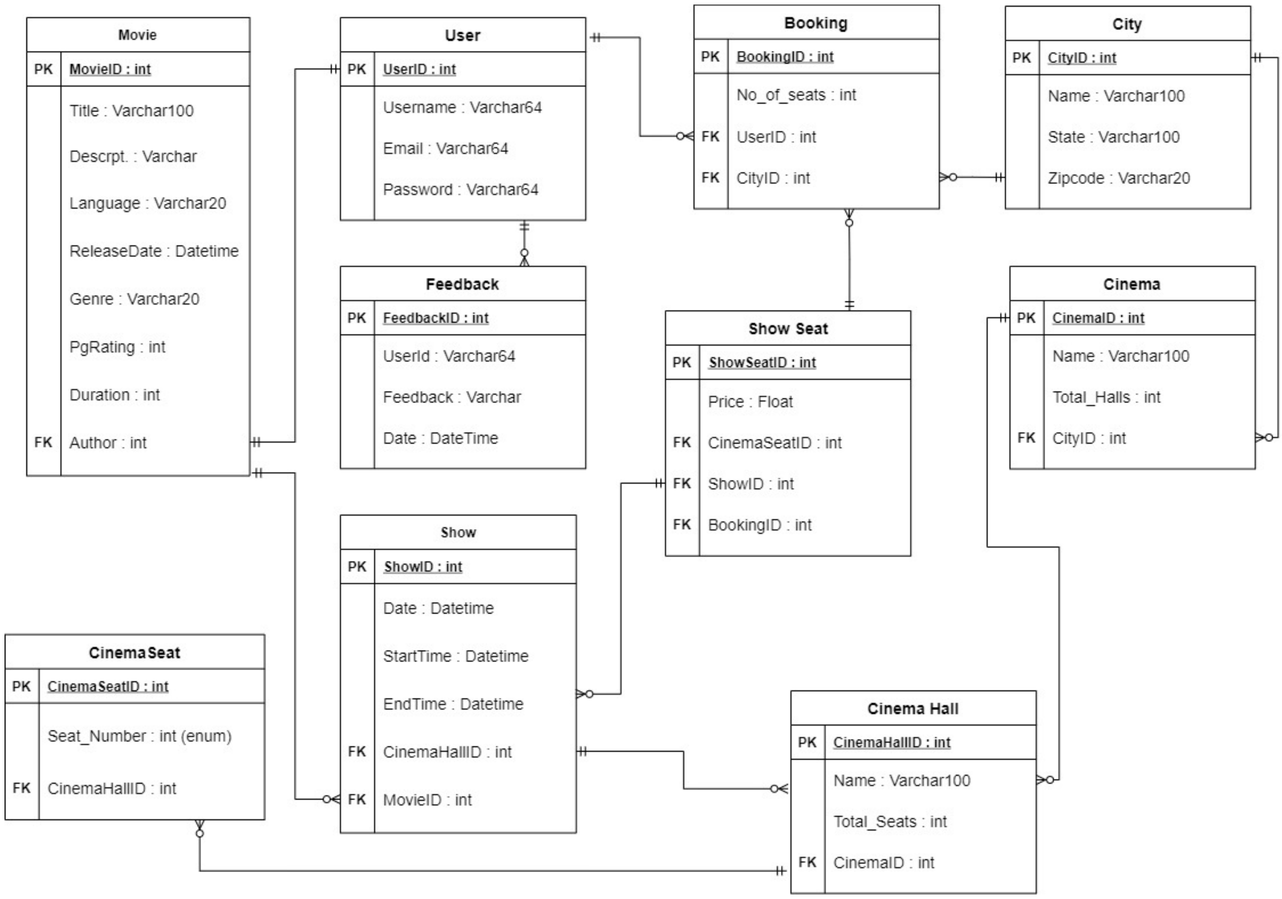


Figure 1: ER diagram of our mini-project

4 Source Code

Filtering the movies based on language, genre, Duration, PG Rating and ordering based on release date

```
def home(request):
    if request.method == ’GET’:
        # Get language
        if len(request.GET.getlist(’language’)) == 0: # No language selected
            LANGUAGES = ”(SELECT language FROM dashboard_movie)”
        else:
            LANGUAGES = request.GET.getlist(’language’)
        # Get genre
        if len(request.GET.getlist(’genre’)) == 0: # No genre selected
            GENRES = ”(SELECT genre FROM dashboard_movie)”
        else:
            GENRES = request.GET.getlist(’genre’)
        # Get max duration
        if request.GET.get(’duration’):
            DURATION = request.GET.get(’duration’)
        else:
            DURATION = ”(SELECT MAX(duration) FROM dashboard_movie)”

        # Get max pg_rating
        if request.GET.get(’pg_rating’):
            PG_RATING = request.GET.get(’pg_rating’)
        else:
            PG_RATING = ”(SELECT MAX(pg_rating) FROM dashboard_movie)”

        # Get order_by
        if request.GET.get(’order_by’):
            ORDER_BY = request.GET.get(’order_by’)
        else:
            ORDER_BY = ”release_date”
        # Get desc
        if request.GET.get(’desc’):
            DESC = ”DESC”
        else:
            DESC = ””

    languages_query =f’SELECT DISTINCT 1 as id,language FROM dashboard_movie’
    genres_query = f’SELECT DISTINCT 1 as id, genre FROM dashboard_movie’
    pg_ratings_query = f”””
                        SELECT DISTINCT 1 as id, pg_rating
                        FROM dashboard_movie ORDER BY pg_rating”””
    movies_query = f”””
                        SELECT * FROM dashboard_movie
                        WHERE language IN {LANGUAGES}
                        AND genre in {GENRES}
                        AND duration <= {DURATION}
                        AND pg_rating <= {PG_RATING}
                        ORDER BY {ORDER_BY}
                        {DESC}
                    ”””
```

Searching for a movie based on the name of the movie

```
def search_bar(request):
    if request.method == ’GET’:
        search = request.GET.get(’search’)
        search_query = f”””
                      SELECT * FROM dashboard_movie
                      WHERE title = ”{search}”
                      ”””
```

Adding to the bookings table when a user books a show

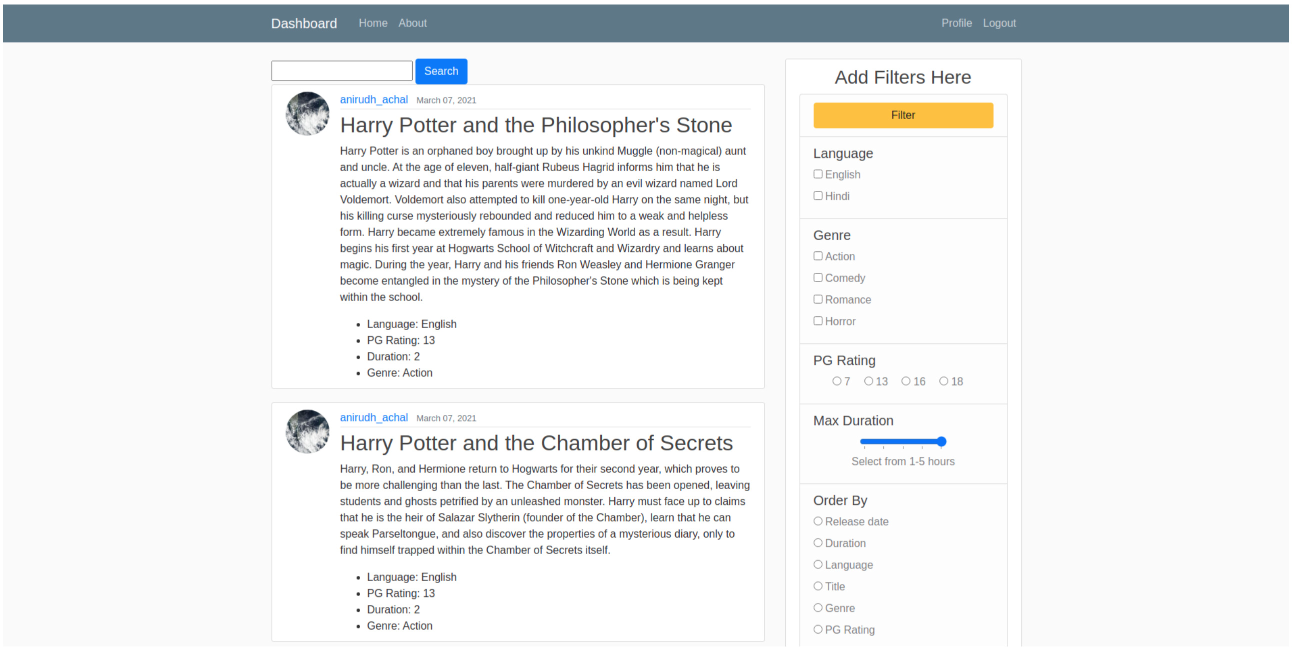
```
def book(request,pk):
    if request.method == ’POST’:
        b_form = BookingForm(request.POST)
        if b_form.is_valid():
            b_form.instance.user = request.user
            b_form.save()
            messages.success(request, f’Your Booking Was Succesfull’)
            return redirect(’/’)
    else:
        b_form = BookingForm()
```

Front-end of a movie page where the user can see the movie details and book a show

```
{% extends ”dashboard/base.html” %}
{% block content %}
  <article class=”media content-section”>
    <img class=”rounded-circle article-img” src=”{{object.author.profile.imag
    <div class=”media-body”>
      <div class=”article-metadata”>
        <a class=”mr-2” href=”#”>{{ object.author }}</a>
        <small class=”text-muted”>{{ object.release_date|date:”F d, Y” }}</sm
        <h2 class=”article-title” >{{ object.title }}</a></h2>
        <p class=”article-content”>{{ object.description }}</p>
      </div>
      <ul>
        <li>Language: {{ object.language }}</li>
        <li>PG Rating: {{ object.pg_rating }}</li>
        <li>Duration: {{ object.duration }}</li>
        <li>Genre: {{ object.genre}}</li>
      </ul>
      <center><a class=”btn btn-primary” href=”book”>Book Now</a></center>
    </div>
  </article>
{% endblock content %}
```

Github repo link to our project - Link

5 Results



anirudh_achal March 07, 2021

Harry Potter and the Philosopher's Stone

Harry Potter is an orphaned boy brought up by his unkind Muggle (non-magical) aunt and uncle. At the age of eleven, half-giant Rubeus Hagrid informs him that he is actually a wizard and that his parents were murdered by an evil wizard named Lord Voldemort. Voldemort also attempted to kill one-year-old Harry on the same night, but his killing curse mysteriously rebounded and reduced him to a weak and helpless form. Harry became extremely famous in the Wizarding World as a result. Harry begins his first year at Hogwarts School of Witchcraft and Wizardry and learns about magic. During the year, Harry and his friends Ron Weasley and Hermione Granger become entangled in the mystery of the Philosopher's Stone which is being kept within the school.

- Language: English
- PG Rating: 13
- Duration: 2
- Genre: Action

anirudh_achal March 07, 2021

Harry Potter and the Chamber of Secrets

Harry, Ron, and Hermione return to Hogwarts for their second year, which proves to be more challenging than the last. The Chamber of Secrets has been opened, leaving students and ghosts petrified by an unleashed monster. Harry must face up to claims that he is the heir of Salazar Slytherin (founder of the Chamber), learn that he can speak Parseltongue, and also discover the properties of a mysterious diary, only to find himself trapped within the Chamber of Secrets itself.

- Language: English
- PG Rating: 13
- Duration: 2
- Genre: Action

Add Filters Here

Language

☐ English
☐ Hindi

Genre

☐ Action
☐ Comedy
☐ Romance
☐ Horror

PG Rating

○ 7 ○ 13 ○ 16 ○ 18

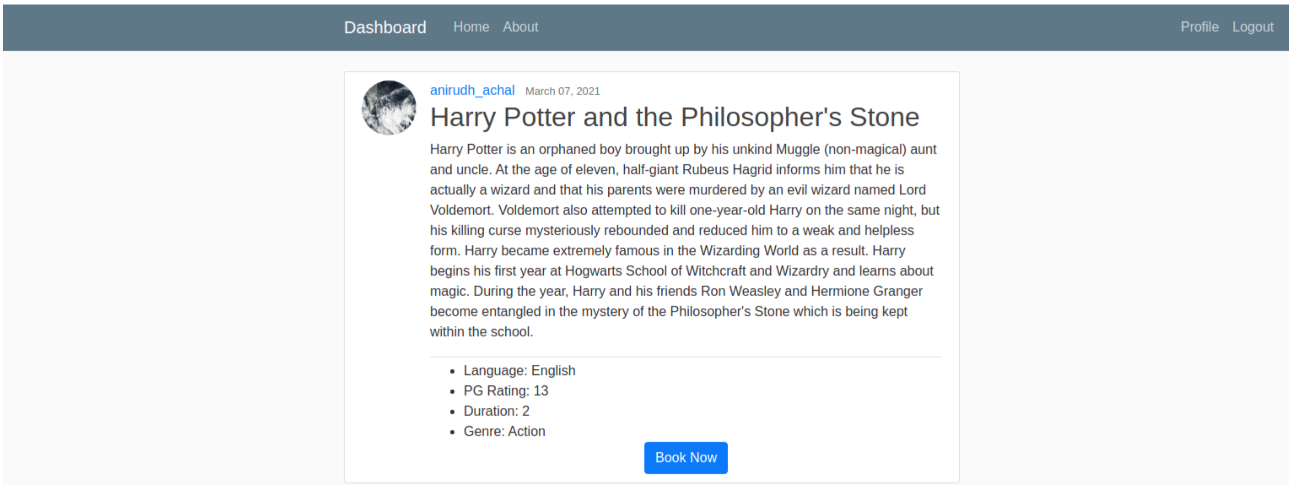
Max Duration

Select from 1-5 hours

Order By

○ Release date
○ Duration
○ Language
○ Title
○ Genre
○ PG Rating

Figure 2: Dashboard



anirudh_achal March 07, 2021

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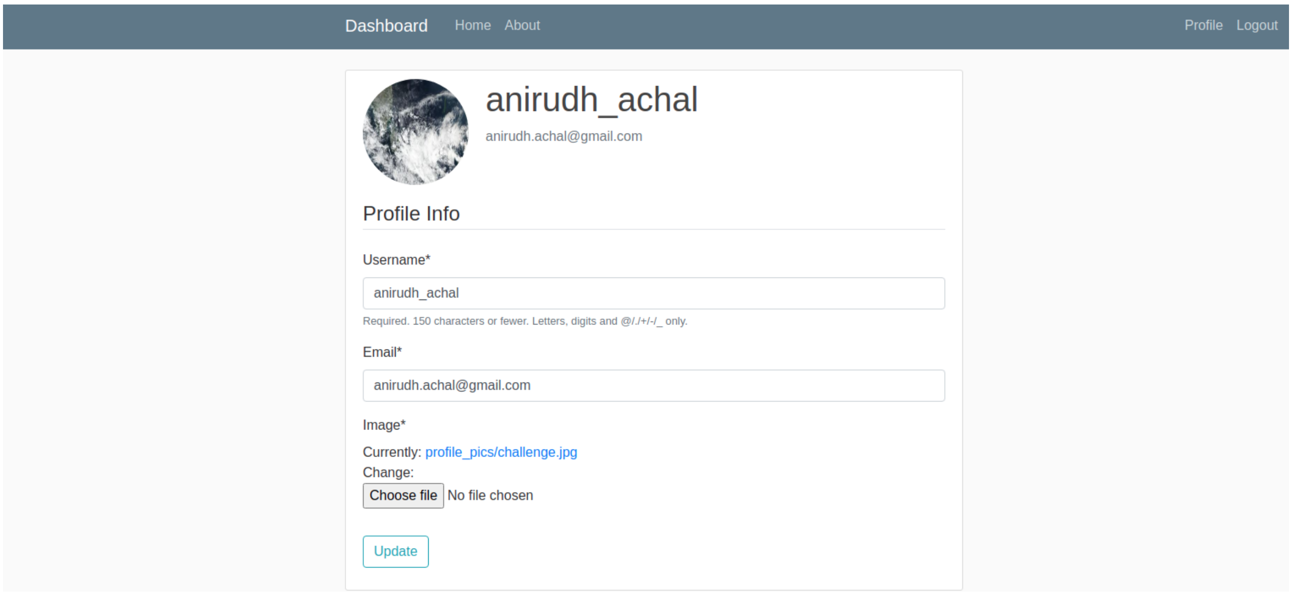
- Language: English
- PG Rating: 13
- Duration: 2
- Genre: Action

Figure 3: Movie Page



anirudh_achal

anirudh.achal@gmail.com

Profile Info

Username*

anirudh_achal

Required. 150 characters or fewer. Letters, digits and @/./+/-/_ only.

Email*

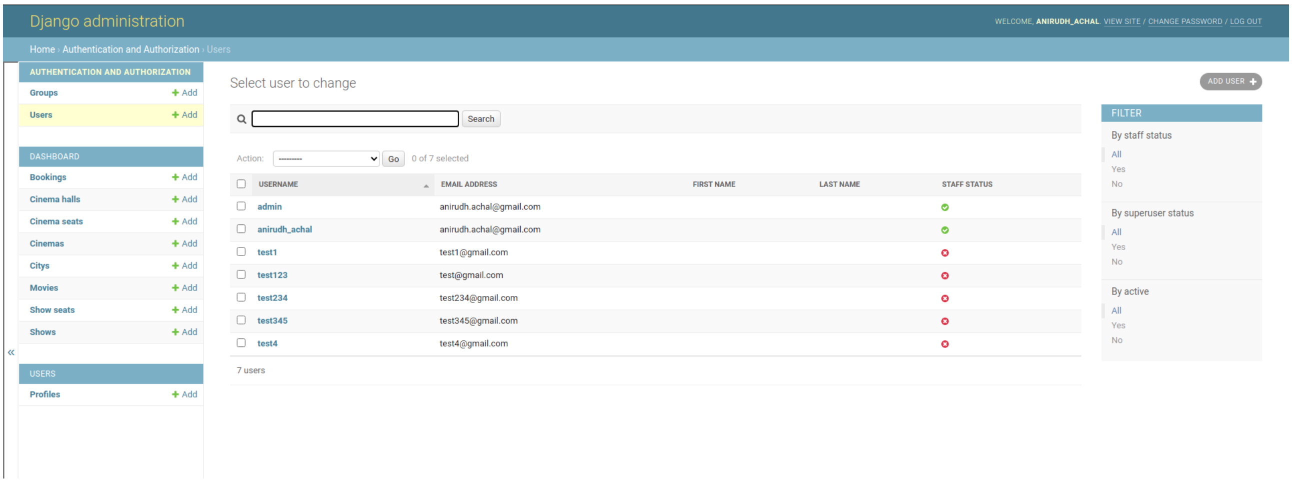
anirudh.achal@gmail.com

Image*

Currently: profile_pics/challenge.jpg

Change:

Figure 4: Profile Page



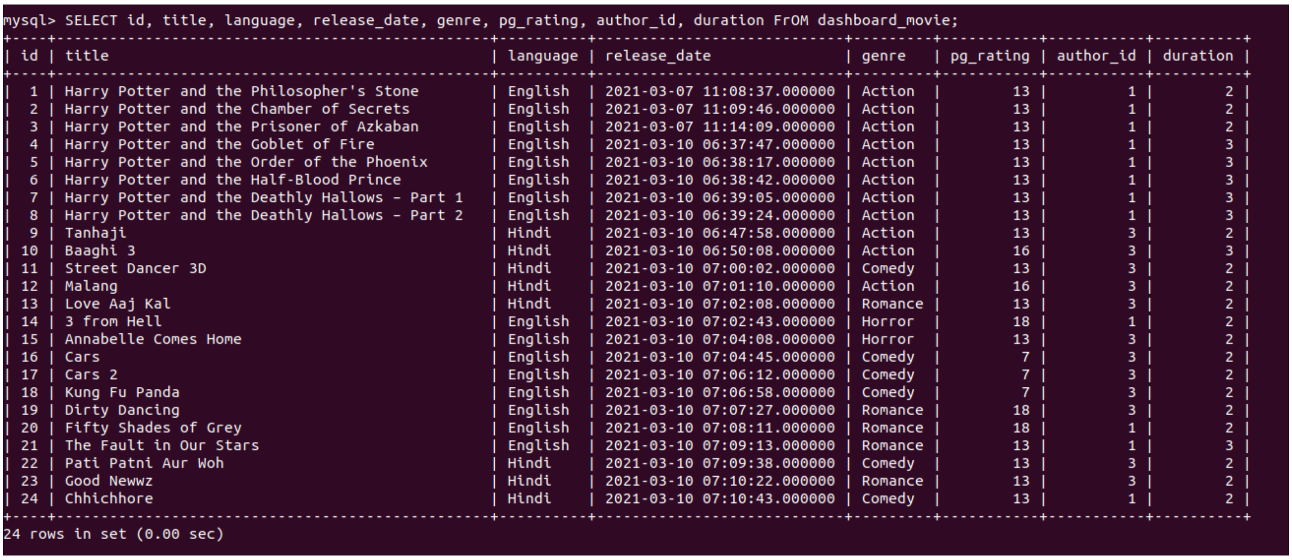
Select user to change

0 of 7 selected

	USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF STATUS
□	admin	anirudh.achal@gmail.com			✓
□	anirudh_achal	anirudh.achal@gmail.com			✓
□	test1	test1@gmail.com			✗
□	test123	test@gmail.com			✗
□	test234	test234@gmail.com			✗
□	test345	test345@gmail.com			✗
□	test4	test4@gmail.com			✗

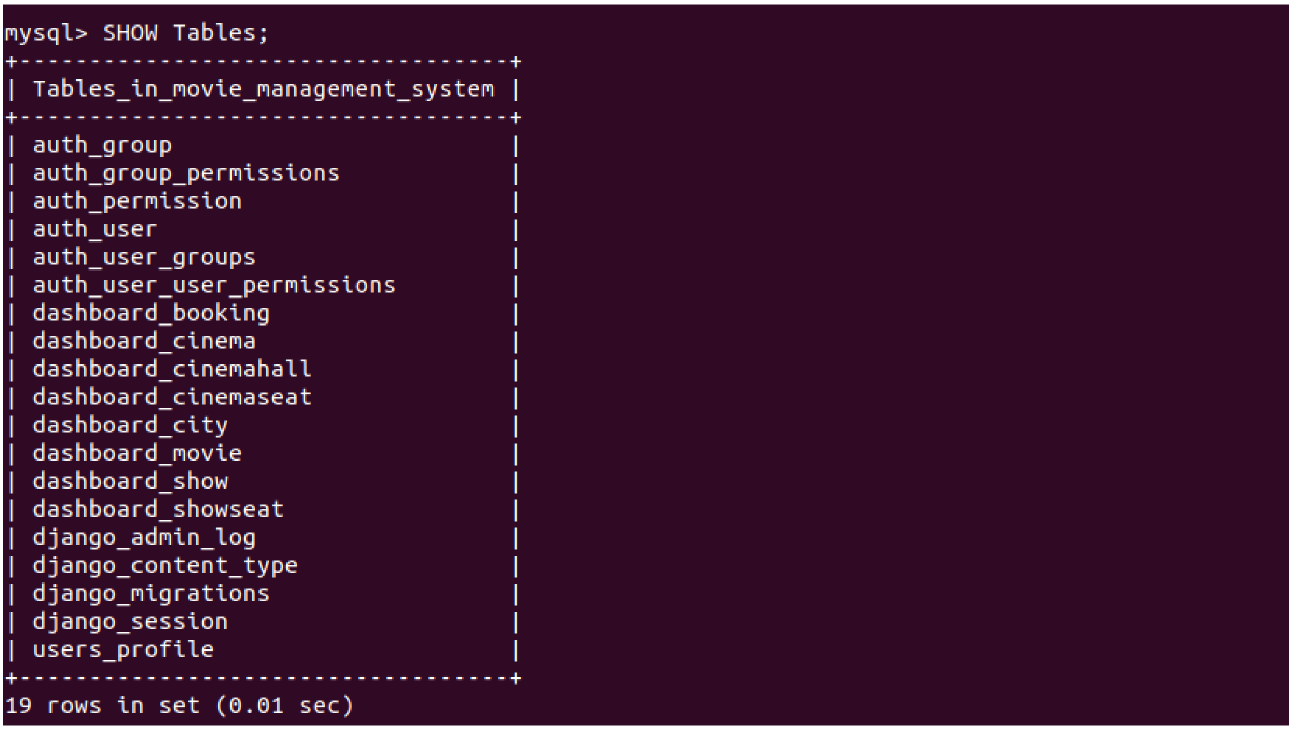
7 users

Figure 5: Admin Page



```
mysql> SELECT id, title, language, release_date, genre, pg_rating, author_id, duration FrOM dashboard_movie;
+----+-----------------------------------------------+----------+----------------------------+---------+-----------+-----------+----------+
| id | title                                         | language | release_date               | genre   | pg_rating | author_id | duration |
+----+-----------------------------------------------+----------+----------------------------+---------+-----------+-----------+----------+
|  1 | Harry Potter and the Philosopher's Stone      | English  | 2021-03-07 11:08:37.000000 | Action  |        13 |         1 |        2 |
|  2 | Harry Potter and the Chamber of Secrets       | English  | 2021-03-07 11:09:46.000000 | Action  |        13 |         1 |        2 |
|  3 | Harry Potter and the Prisoner of Azkaban      | English  | 2021-03-07 11:14:09.000000 | Action  |        13 |         1 |        2 |
|  4 | Harry Potter and the Goblet of Fire           | English  | 2021-03-10 06:37:47.000000 | Action  |        13 |         1 |        3 |
|  5 | Harry Potter and the Order of the Phoenix     | English  | 2021-03-10 06:38:17.000000 | Action  |        13 |         1 |        3 |
|  6 | Harry Potter and the Half-Blood Prince        | English  | 2021-03-10 06:38:42.000000 | Action  |        13 |         1 |        3 |
|  7 | Harry Potter and the Deathly Hallows - Part 1 | English  | 2021-03-10 06:39:05.000000 | Action  |        13 |         1 |        3 |
|  8 | Harry Potter and the Deathly Hallows - Part 2 | English  | 2021-03-10 06:39:24.000000 | Action  |        13 |         1 |        3 |
|  9 | Tanhaji                                       | Hindi    | 2021-03-10 06:47:58.000000 | Action  |        13 |         3 |        2 |
| 10 | Baaghi 3                                      | Hindi    | 2021-03-10 06:50:08.000000 | Action  |        16 |         3 |        3 |
| 11 | Street Dancer 3D                              | Hindi    | 2021-03-10 07:00:02.000000 | Comedy  |        13 |         3 |        2 |
| 12 | Malang                                        | Hindi    | 2021-03-10 07:01:10.000000 | Action  |        16 |         3 |        2 |
| 13 | Love Aaj Kal                                  | Hindi    | 2021-03-10 07:02:08.000000 | Romance |        13 |         3 |        2 |
| 14 | 3 from Hell                                   | English  | 2021-03-10 07:02:43.000000 | Horror  |        18 |         1 |        2 |
| 15 | Annabelle Comes Home                          | English  | 2021-03-10 07:04:08.000000 | Horror  |        13 |         3 |        2 |
| 16 | Cars                                          | English  | 2021-03-10 07:04:45.000000 | Comedy  |         7 |         3 |        2 |
| 17 | Cars 2                                        | English  | 2021-03-10 07:06:12.000000 | Comedy  |         7 |         3 |        2 |
| 18 | Kung Fu Panda                                 | English  | 2021-03-10 07:06:58.000000 | Comedy  |         7 |         3 |        2 |
| 19 | Dirty Dancing                                 | English  | 2021-03-10 07:07:27.000000 | Romance |        18 |         3 |        2 |
| 20 | Fifty Shades of Grey                          | English  | 2021-03-10 07:08:11.000000 | Romance |        18 |         1 |        2 |
| 21 | The Fault in Our Stars                        | English  | 2021-03-10 07:09:13.000000 | Romance |        13 |         1 |        3 |
| 22 | Pati Patni Aur Woh                            | Hindi    | 2021-03-10 07:09:38.000000 | Comedy  |        13 |         3 |        2 |
| 23 | Good Newwz                                    | Hindi    | 2021-03-10 07:10:22.000000 | Romance |        13 |         3 |        2 |
| 24 | Chhichhore                                    | Hindi    | 2021-03-10 07:10:43.000000 | Comedy  |        13 |         1 |        2 |
+----+-----------------------------------------------+----------+----------------------------+---------+-----------+-----------+----------+
24 rows in set (0.00 sec)
```

Figure 6: Movies



```
mysql> SHOW Tables;
+----------------------------------+
| Tables_in_movie_management_system |
+----------------------------------+
| auth_group                       |
| auth_group_permissions           |
| auth_permission                  |
| auth_user                        |
| auth_user_groups                 |
| auth_user_user_permissions       |
| dashboard_booking                |
| dashboard_cinema                 |
| dashboard_cinemahall             |
| dashboard_cinemaseat             |
| dashboard_city                   |
| dashboard_movie                  |
| dashboard_show                   |
| dashboard_showseat               |
| django_admin_log                 |
| django_content_type              |
| django_migrations                |
| django_session                   |
| users_profile                    |
+----------------------------------+
19 rows in set (0.01 sec)
```

Figure 7: Tables

6 References:

1. Github Repo Link

2. Movie Ticket Booking Database Design

3. Django Documentation

4. Django Tutorial

****** END ******