AN EFFICIENT MOVIE SEARCHING TECHNIQUE WITH MULTIPLE SEARCHING CRITERIA USING MOVIE SEARCH DIRECTORY APPLICATION

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Abstract: In this difficult scenario of COVID-19 where people don't have many options to entertain themselves, movies are the best way to keep one entertained as well as keep them away from negative thoughts. Movies provide a person peace of mind and also helps them relax so that one can stop thinking of all the world and enjoy their private time

Watching movies is a good option to kill time but which movie to watch may be a headache for many of us and here my project Movies Search Directory comes into action where a person can search for movies efficiently on different criteria so they can decide which movies to watch according to their type of choice on movies. There are over 500000 movies which exist till now and finding a correct movie which will amuse you and shows up all your interest may be a hectic task and so my project solves all these problems. I have used JAVA for project development as it's a platform-independent and easy to use programming language and contains many usable graphical components which can be implemented in this project to make it more visually attractive

Keywords: Movie Search Directory, JAVA, visually attractive, platform-independent

INTRODUCTION

This project is based on Movie Search Directory. This project will be very helpful for Movie Search, as it reduces the manual work done by the clerical staff. Their work just remains to feed the data into the database. Movie Search Directory software is a free high-end software solution for maintaining details that are related to Movie Search Directory in a very efficient way. It is secured software no unauthorized user can access details of the Movies due to different user accounts with user password, so keep a better track with management. The back end is carried out by MS-SQL where all the movie details will be stored in normalized tables to avoid data redundancy

CHALLENGES

There were many challenges that I came across while developing this project and a few of them are mentioned below

1. Giving updated movies list and maintain the database correctly so that user won't have any delay for searching the movie since the movie has announced
2. Giving reports on different individual criteria will contain information of the movies which fall under that criterion like the producer, director, etc.
3. To create a personalized page for every registered user depending on their previous search on movies, favorite genre, and language
4. Creating a normalized database to reduce the redundancy as most of the movies may have the same dataset elements like actors, directors, genre, etc.
5. Storing images in a hierarchal manner to avoid confusion while retrieving and displaying images

FEATURES

The movie search directory project is developed to provide features to all the users so that they can easily search for movies. The main features of this project are mentioned below

1. Easy to use graphical user interface
2. Watch the trailer on the same searching page
3. Personalized user experience for all the registered user
4. Rate, give reviews and watch other user's
5. review on movies
6. Exciting auto changing background to keep the user's entertained while exploring the application
7. Combination search feature to enable the user to search movies on either one or combination of these criteria's
   - Movie name
   - Genre
   - Director
   - Actor
   - Actress
   - Language
   - User rating
8. User can search movies by name using only one certain phrase of the complete name of the movie

PROCESS FLOW

1. Admin

a. Performs login action in the application.
b. Adds and edit movie details
c. Reads all the movie demands and maintain the database
d. Add necessary information like new actors, company name, actors, trailers, etc.
e. Update movies for the award given to them on different criteria's

2. Registered User

a. Performs registration and login actions in the application.
b. Can rate the movie and give reviews
c. Can watch movie reports based on different criteria
d. Can watch the trailer by clicking the movie link
e. Can Search a movie based on a combination of search criteria
f. Personalized movie page according to previous search criteria
g. Can watch the comments given by other users for that particular movie

3. Normal Visitors

i. Can watch movie reports based on different individual criteria
ii. Can Search a movie based on combination of search criteria

WORKING

When the user's starts the application they will be welcomed with the splash screen animation where there will be loading process bar and after that user will be directed to the main form of the application

The Main form will change its background images automatically after a certain period of time to give a good visual impact to the visitors

The main form will have two options namely login and search

The search option without login won't have all the featured but the user will be able to search the movie but will not be allowed to rate or review the movie

When the user uses login option they can either login to their existing account or may create a new account to be a registered user

There are two types of login 1.Admin Login 2.Normal Login

When admin logs in the admin settings options will be enabled from where the admin can perform the following tasks

Update movie details

Add new awards, release dates for movies, movie cast and their information, new movie Production Company and other such kind of information

Update trailer links or add new trailer links for movies when new trailers have launched

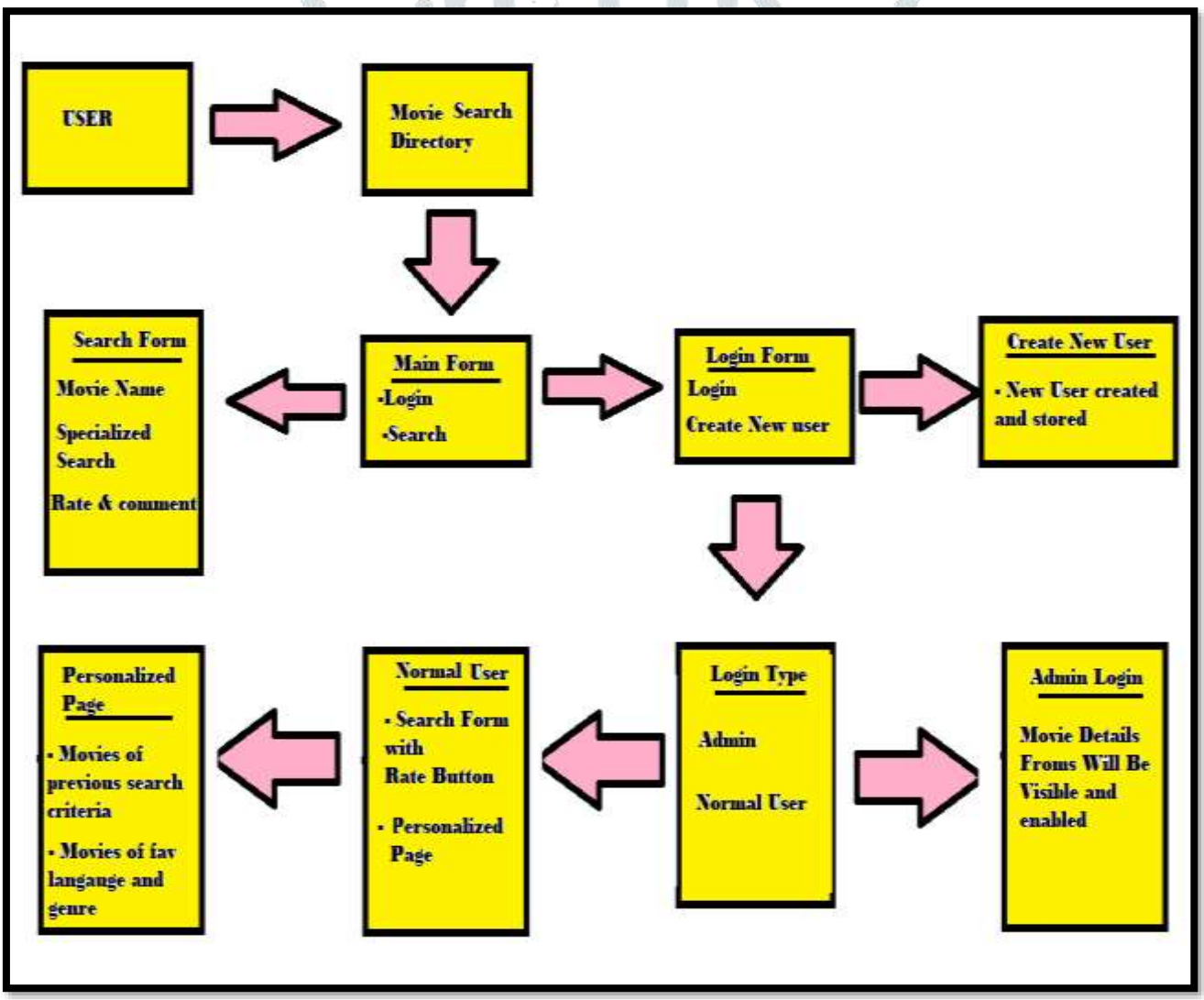
When a registered user logs in reports, personalized page and search option with rating and review option will be enabled

Registered user can see the movie reports of the movie on the following criteria's

Movie Name Wise
Director Wise
Producer Wise
Language Wise
Country Wise
Company Wise
Release Year Wise
Genre Wise
Actor/Actress Wise
Upcoming Movies
Currently Playing Movies
Top Rated Movies
Current Top Rated Movies

Registered user can use the options of personalized page to have a quick look of the movies which are of the favourite genre which they have mentioned while signing up and the last successful search which they have done using movie search directory

ARCHITECTURE/WORKFLOW



IMPLEMENTATION

For building this application I have used java and eclipse IDE. The graphical user interface has been developed using JDialog and JFrame classes and implementing all the necessary event listeners like ActionListener, WindowListener class which are present in javax.swing.event package. All the buttons click event is carried out by the action

listener abstract method i.e. actionPerfomed (ActionEvent) where all the business logic is applied and the action is performed based on the button action. I have also used ItemListner for monitoring the changes made by the user in

JComboBox which are used in multiple areas in the application. The Event is defined for every JComboBox in the application where the abstract method of ItemListner itemStateChanged() is called and the action is performed like loading the database table or displaying content regarding the selected item etc. will be performed. The image are displaced using the JLabel class and The ImageIcon class where the image is collected from the system using the ImageIcon class and will be displayed using JLabel using setIcon method of JLabel class. The records are displayed using JTable and DefaultTableModel for determining the number of columns and the column heading. All the major forms have been implemented using the above techniques. The database which is used is the MySQL database and the software which I used for creating and monitoring database is the MYSQL workbench using which I have creating all the necessary tables and inserted test data so that I can the working of this application. One of the interesting features of the application is the user rating features where user can rate a movie and other user can see the ratings given to that particular movie , this is achieved by taking the average of the current user rating and previous user rating and using the upper bound value and storing it in the database.

Talking about the database connectivity I have used java.sql package for providing database connectivity to the application. The CRUD applications are performed using the PreparedStatement Class and Statement class of java.sql package and result are displayed through the use of ResultSet class using which data is loaded into JTable using DefaultTableModel Class method called add(). Instead of accessing the tables in database directly foe showing record and writing the same code in multiple areas which increase the code length I have created view in the tables using the tables and complex joins to save time and eliminate complexity. Views are the imaginary tables and do not have any data of their own so instead of creating more tables I have use the existing tables and created views.

I have created these below tables which are normalized. Normalization is the process of breaking down database tables into much smaller tables to reduce or eliminate the redundancy. Redundancy can be simply explained as the duplicate data or repetition of data which increase the size and also decreases the efficiency of database as more number of records are directly proportional to the searching time needed.

The list of tables used for storing data in normalized form are listed below

award_table
cast_table
category_table
company_table
country_table
genre_table
language_table
login_table
movie_award_table
movie_cast
movie_company
movie_genre
movie_lang_country
movie_release
movie_table
movie_trailer

To create a personalised user page where they will be recommended with movies of their choices I have collected their favourite choice while registration like favourite genre and actor etc. Of user and other data has also been stored for every movie the user searches using the movie search directory. The data is stored in the database table from where this data is used in a SQL query to generate all the movies which fall in these criteria's.

To implement a mechanism where the user can watch a movie trailer using YouTube link I have created a table named as movie_trailer where the movie trailer will be stored in a string format and created a Desktop class which is present in java.net.URI and browse method of Desktop class which takes the string which is present in the database table with the help of database

connectivity and uses the system default browser to open the YouTube link.

SAMPLE IMAGES OF APPLICATION

Description: Search form layout

Description: Recommended movies form

Description: Movies form from where admin can add new movies or edit existing movies

SCOPE FOR FURTHER DEVELOPMERT

Presently the Application is window based we can further develop it as a Web-based Application.
Reports can be increased like Report according to an Award given to the movie can be included.
More animations can be added to make it even more fun to use
AI can be implemented to recommend movies

CONCLUSION

After developing this project I think this project named movie search directory will help people to save their time and efforts of searching movies on a different platform and also entertain them by providing all sorts of information about the movie and give them clear opinion weather to watch that movie or find anything else as finding new things might be fun when these kinds of software exist

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