Project: Movie Search

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1. Milestone 4 Accomplishment

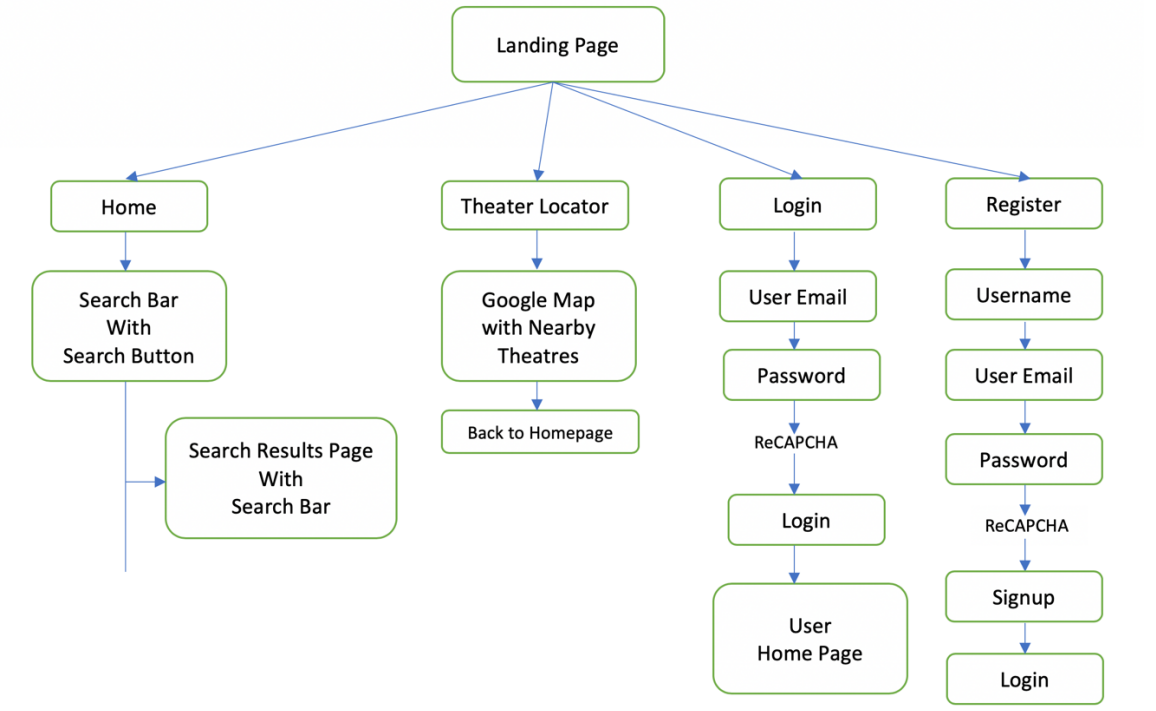
List specifications of this milestone and label whether each specification is fulfilled or not.

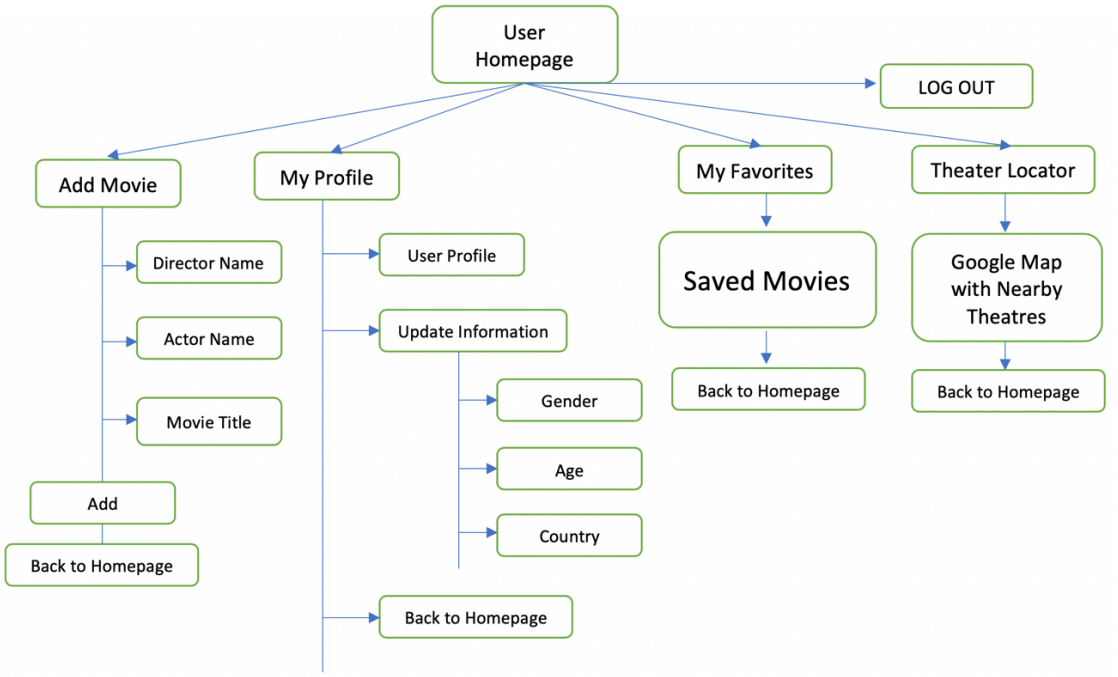
Table 1: Overview of status for Milestone 4 specifications.

Fulfilled	#	Description
Yes	1	Users can delete items from their favorite list.
Yes	2	Items in the favorite lists should be descriptive (can't be just a link) and are linked to and external page or a summary page of the item.
Yes	3	The search engine implements at least one of the features spell check, autocomplete, Google Map API, Speech-to-text API, or other APIs permitted by the instructor.

2. Architecture

Architecture of my project is quite simple and is shown as in the diagram below.





My project is all about movies where a user can search a movie and get all the relevant details of the movie. Hence, I need a dataset which gives me all the details of a movie.

The IMDB movie dataset which has information about 5000 movies and each movie has 28 fields as shown in table below.

#	Field	Type	Example
1	color	String	Color
2	director_name	String	James Cameron
3	num_critic_for_reviews	Int	723
4	duration	Int	178
5	director_facebook_likes	Int	0
6	actor_3_facebook_likes	Int	855
7	actor_2_name	String	Joel David Moore
8	actor_1_facebook_likes	Int	1000
9	gross	Int	760505847
10	genres	String	Action|Adventure|Fantasy|Sci-Fi
11	actor_1_name	String	CCH Pounder

12	movie_title	String	Avatar
13	num_voted_users	Int	886204
14	cast_total_facebook_likes	Int	4834
15	actor_3_name	String	Wes Studi
16	facenumber_in_poster	Int	0
17	plot_keywords	String	avatar|future|marine|native|paraplegic
18	movie_imdb_link	String	http://www.imdb.com/title/tt0499549/?ref_=fn_tt_tt_1
19	num_user_for_reviews	Int	3054
20	language	String	English
21	country	String	USA
22	content_rating	Varchar	PG-13
23	budget	Int	237000000
24	title_year	Int	2009
25	actor_2_facebook_likes	Int	936
26	imdb_score	float	7.9
27	aspect_ratio	Float	1.78
28	movie_facebook_likes	Int	33000

3. Implementation

Describe how each major specification is implemented. Point out the program in which each specification is implemented. The following specifications must be addressed.

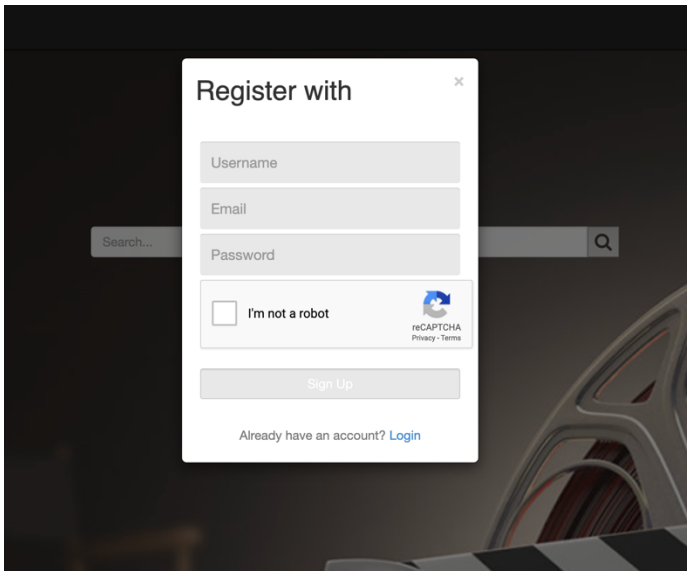
4.1 Account registration (including reCAPTCHA and confirmation email, if applicable)

For the user to login and maintain his own collection of favorite movies, the user must register in our site.

The Registration page consists of three fields Username, Email, Password and User verification by reCAPTCHA.

The Password field and Email field in the registration are restricted with specific formats, user will get a warning if he doesn't follow the specification.

The Account Registration part is implemented by using JavaScript, PHP, and MySQL. The Data Base connection and insertion is implemented in **signup.php**, the design is implemented in **login-register.js** and it is called in **index.php**.

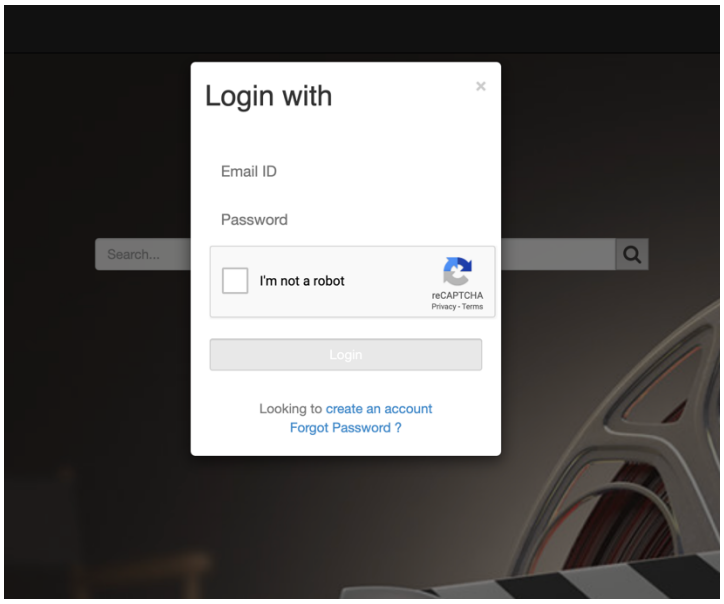


4.2 Account login (including reCAPTCHA)

The Login page consists of two fields Email, Password and User verification by reCAPTCHA.

The Password field and Email field in the registration are restricted with specific formats, user will get a warning if he doesn't follow the specification.

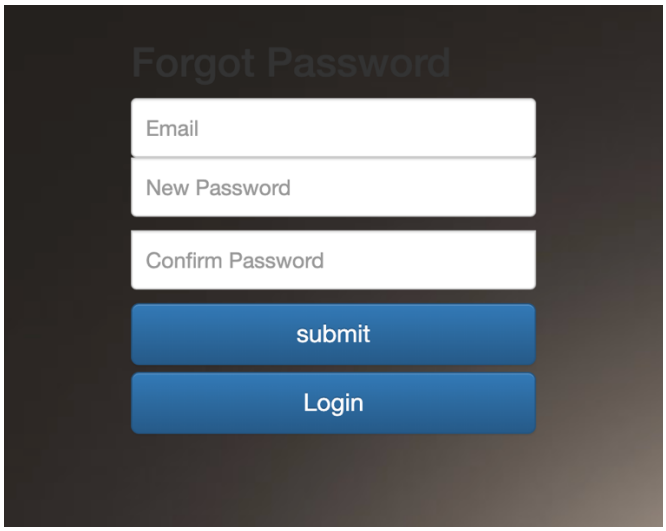
The Login part is implemented by using JavaScript, PHP, and MySQL. The Data Base connection and insertion is implemented in **login.php**, the design is implemented in **login-register.js** and it is called in **index.php**.



4.3 Password reset (including email, if applicable)

The Password reset consists of three fields Email, Password and Confirm Password.

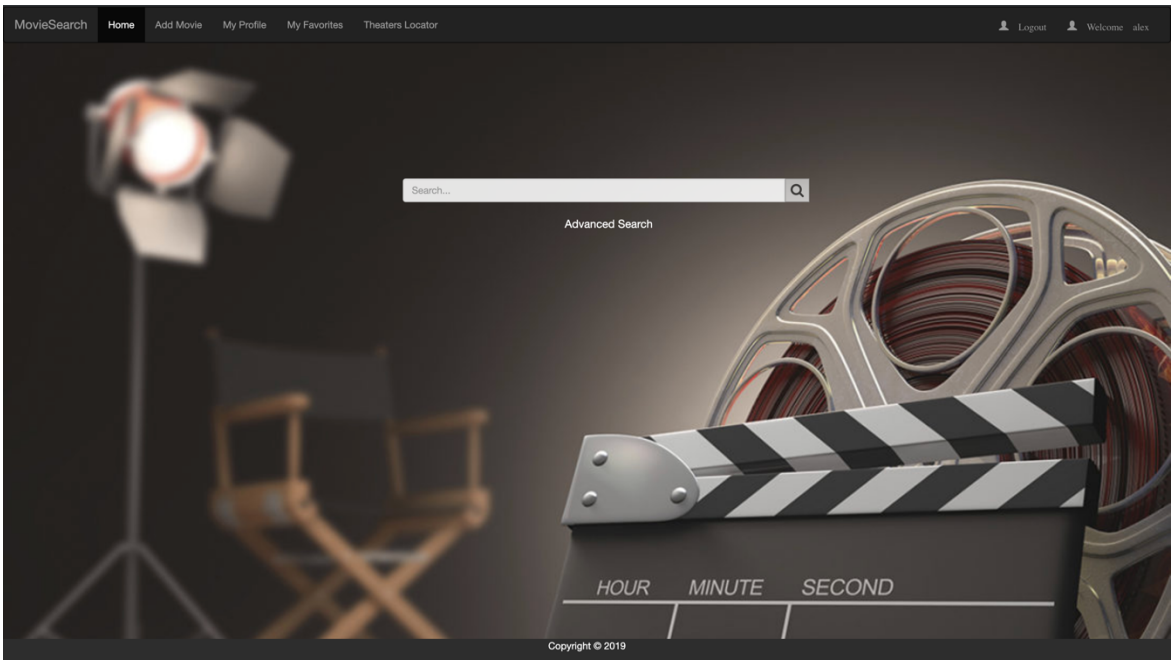
The Login part is implemented by using PHP, and MySQL. The Data Base connection and insertion is implemented in **reset-password.php**, the design is implemented in **ChangePassword.php** and it is called in **Login Form**.



4.4 Users' homepage

User homepage consists of a Search Bar, a Advance Search Button, My profile where users profile details and shown, Movie Addition Feature through which he can add movies into the Data, My Favorites tab in which the movies Saved by him are displayed and a Theater Locator which shows Google Map with all the theatres near him.

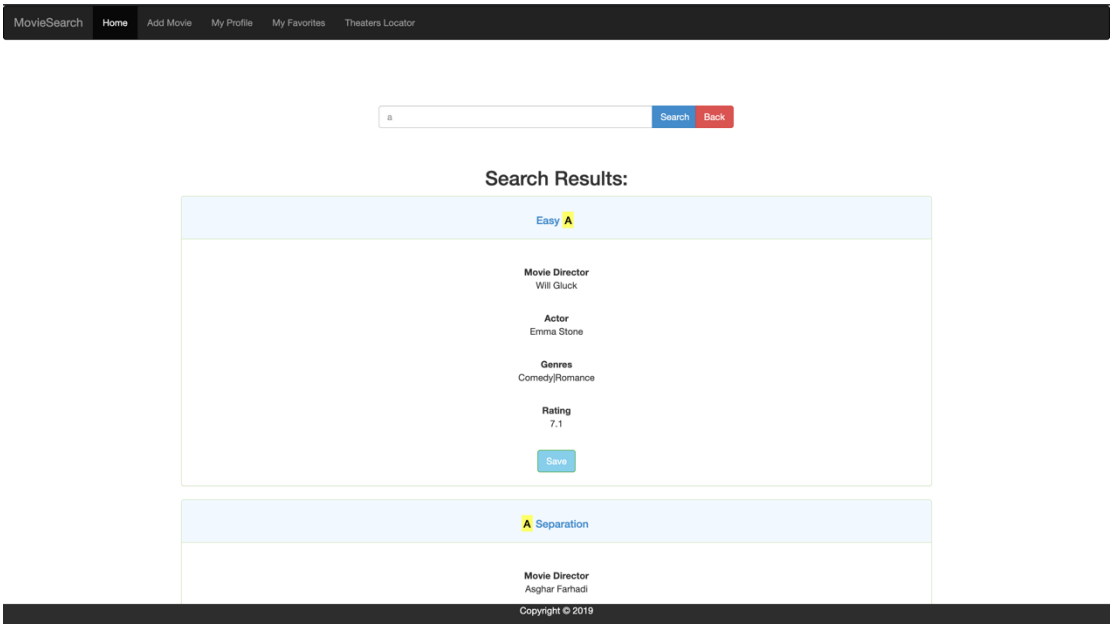
The Users' homepage is implemented in **homepage.php**



4.5 Main search function

In this project we use Elastic-Search to implement search function which gives fast and accurate results.

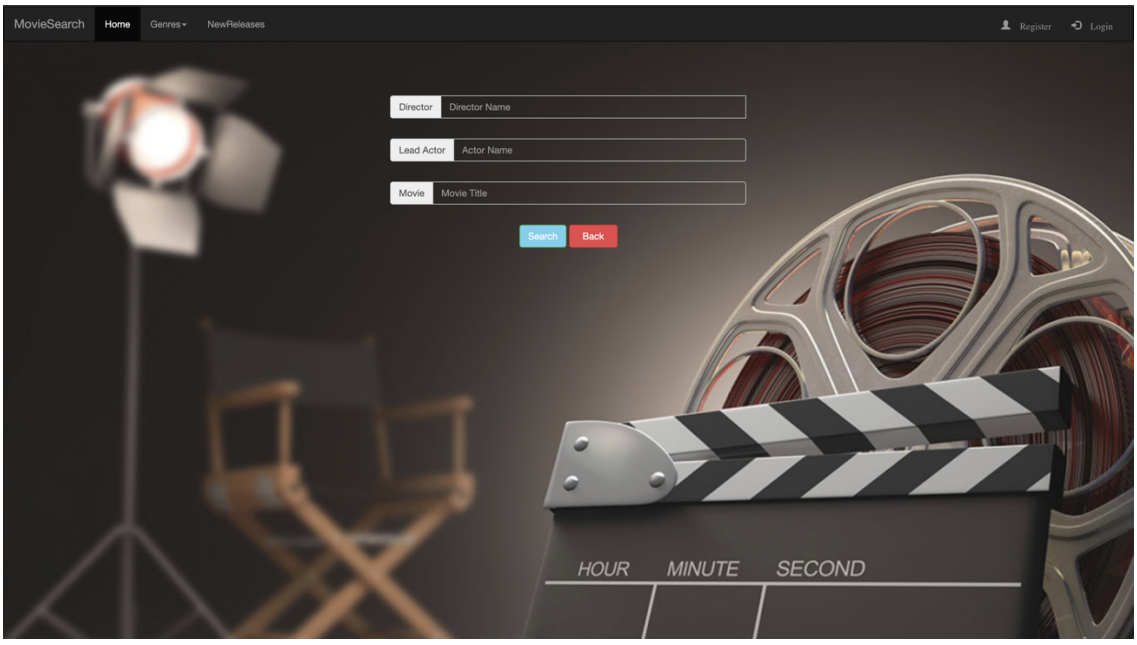
The search function is implemented in **results.php**.



4.6 Advanced search function

The advance search consists of three fields Director Name, Actor Name and Movie Title, a user can search movie using all the fields or any of the fields.

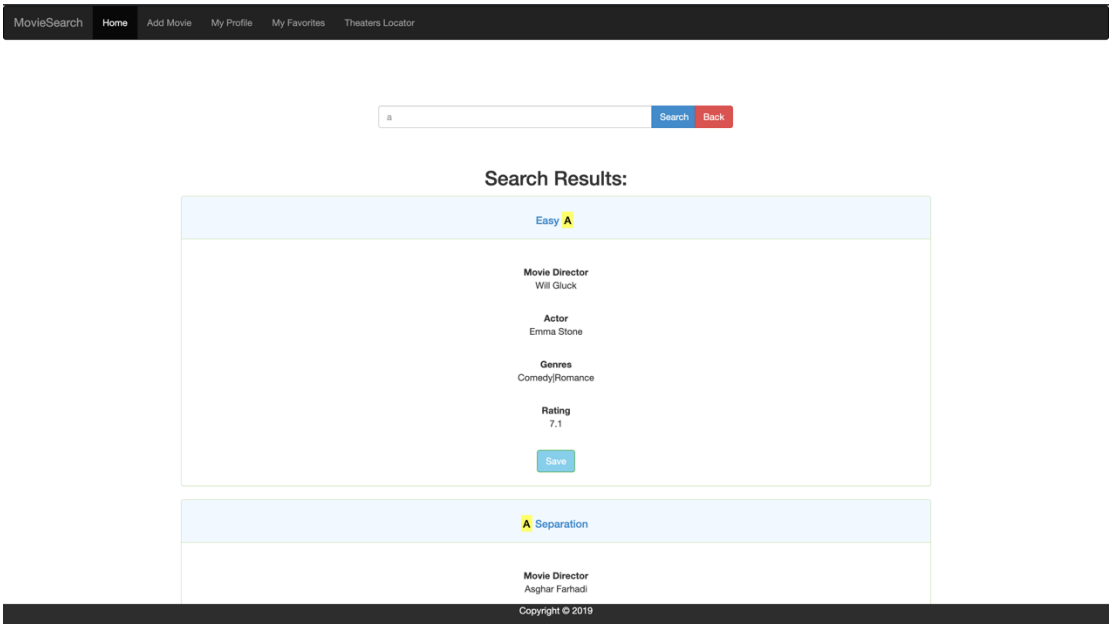
The Advanced search function is implement in **advance.php** and advance results are implemented in **adv-result.php.**



4.7 SERP

Search Engine Results Page shows all the relevant search results of the query and it also consist of a search bar with a search button.

SERP is implemented in **results.php.**



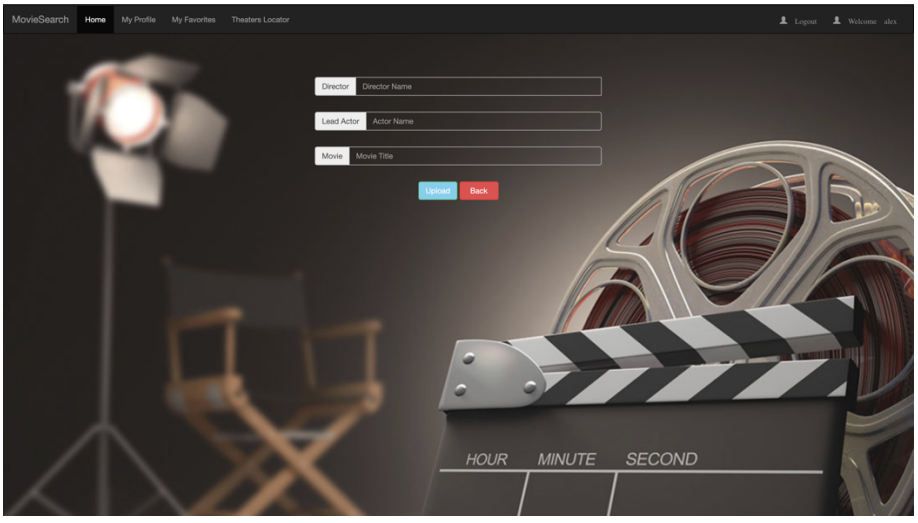
4.8 XSS vulnerability filtering

The XSS vulnerability filtering is implemented by using strip-tags function for search queries. It is implemented in to all the search bars in the webpage.

4.9 Insert a new entry

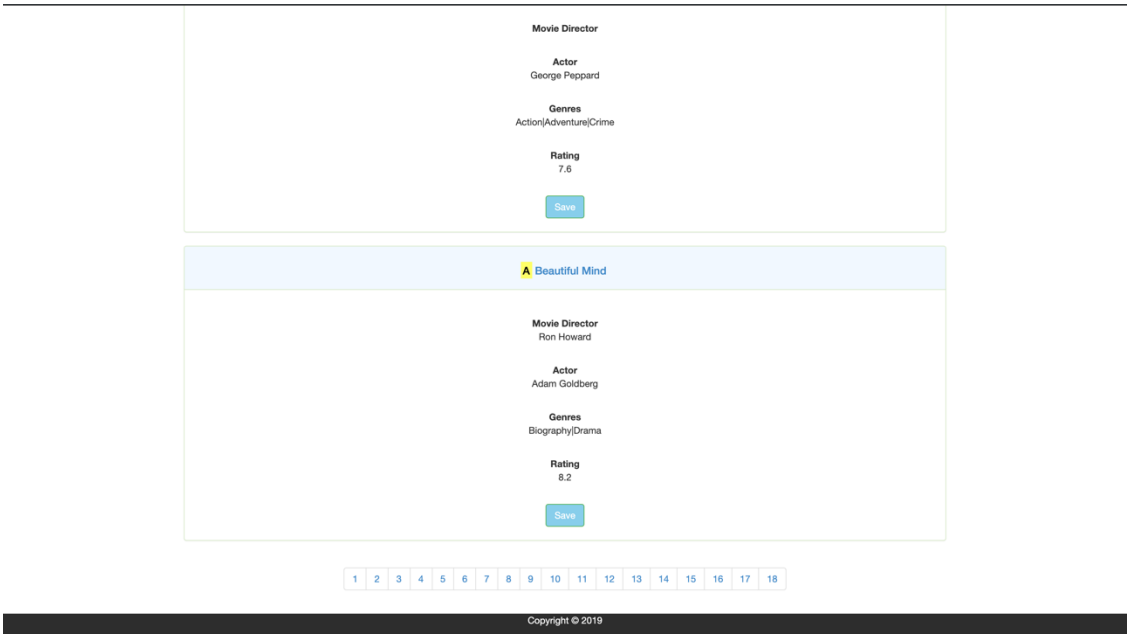
Only User who is logged in can insert a movie, the Add Movie Tab consists of three fields Director Name, Actor Name and Movie Title, a user can add movie using all the fields or any of the fields.

The Insert a new entry function is implemented in **upload.php**.



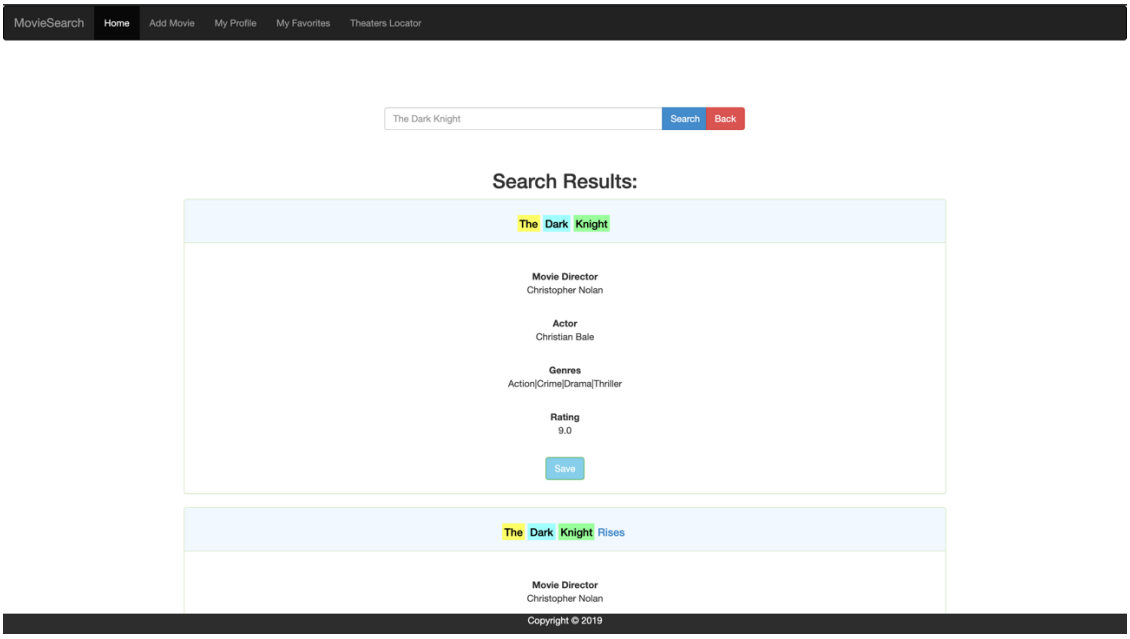
4.10 Pagination

Pagination is implemented using JavaScript, Ajax and PHP in **pagination.js, paginationresults.php and results.php**.



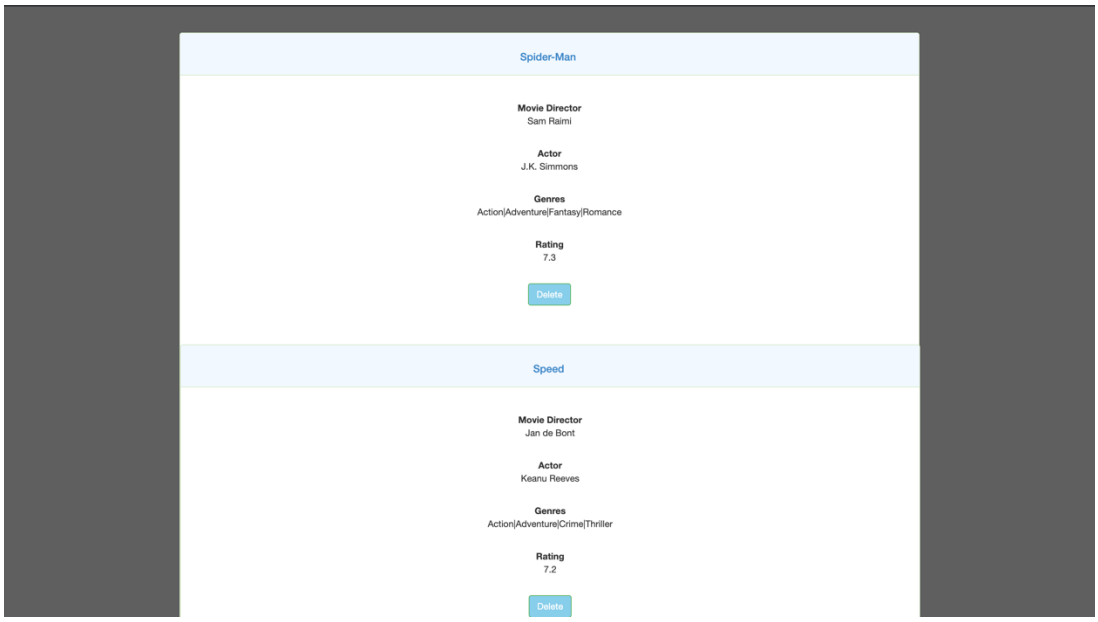
4.11 Highlighting search terms

Highlighting search terms is implemented using JavaScript in **hilitor.js** and **results.php**.



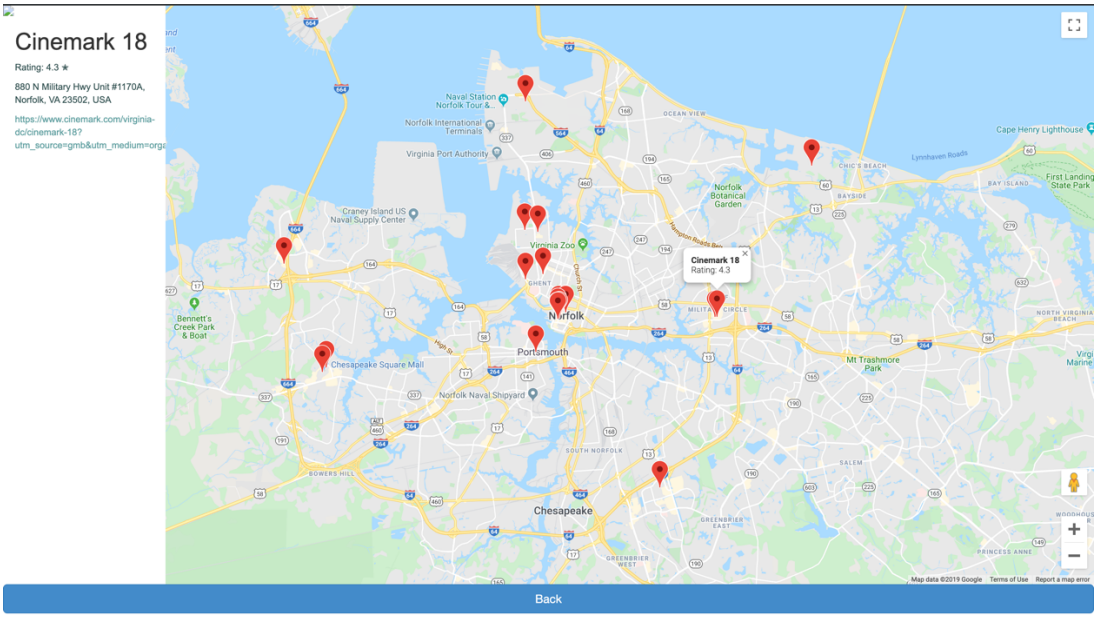
4.12 Save items to user's profiles

Save items to user's profiles is implemented using JavaScript, Ajax, PHP and MySQL in **favourites.php**, **result.js** and **history.php**.



4.14 Google Map API

I used Google Map API to locate Theaters in the nearby Location. It is Implemented in **locator.php.**



Challenges and Lessons

Milestone 2 Challenges:

For me the most challenging part was to implement search, preventing XSS Vulnerability and implementing email verification, which I couldn't implement because of some networking issues. The best part is to learn how to implement search using elastic search and getting the results in a format.

Milestone 3 Challenges:

Implementing pagination was challenging in this milestone I had to use different methods of JavaScript and jQuery to implement pagination

Milestone 4 (Final):

The Most challenging Part was to implement Google Maps API using html, php and JavaScript.

If I had a chance to do it over again, I would have handled XSS Vulnerability and implement Email Verification more efficiently.

4. Additional comments

My Experience in this course was really good. The Course is well structured, and I got to learn many aspects in Web Technologies.