



PISA UNIVERSITY

TASK 3
LARGE-SCALE AND MULTI-STRUCTURED DATABASES

“PISAFLIX 3.0” PROJECT DOCUMENTATION

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DESIGN DOCUMENT

DESCRIPTION

PisaFlix 3.0 is a social network oriented to the discussion of films. A User can visit the profiles of other users and see the pages related to films. In those pages, the User, will find either all the post written by the user or the most recent posts which tag the film. You can follow films and users in order to view the posts that concern them on the home page. New users and movies will be continually suggested, based on your friends and their favourite movies. Finally, a mechanism of privileges guarantee the quality of the contents, uploaded only by trusted users, and the possibility of moderate the posts present within the application.

REQUIREMENTS

MAIN ACTORS

The application will interact only with the **users**, distinguished by their privilege level:

- **Normal User:** a normal user of the application with the possibility of *basic interaction*.
- **Social Moderator:** a trusted user with the possibility to *moderate* the posts.
- **Moderator:** a verified user with the possibility to add and *modify* elements in the application, like film pages.
- **Admin:** an *administrator* of the application, with possibility of a *complete interaction*.

FUNCTIONAL

1. Users can **view** the list of **Movies** available on the platform.
2. Users can **view** the posts about a specific *Movie*.
3. Users can **view** the list of **Users** on the platform.
4. Users can **view** the posts of a specific *User*.
 - a. Users can **register** an account on the platform.
5. Users can **log in** as *Normal users* on the platform in order to do some other operations:
 - a. If logged a *Normal user* can **follow/unfollow** a *Movie*.
 - b. If logged a *Normal user* can **follow/unfollow** a *User*.
 - c. If logged a *Normal user* can **write** a *Post* on a *Movie*.
 - d. If logged a *Normal user* can **view** *Posts* of his following *Movies* and *Users* on the *home page*.
 - e. If logged a *Normal user* can **view** suggestions on *Movies* to follow.
 - f. If logged a *Normal user* can **view** suggestions on *Users* to follow.
 - g. If logged a *Normal user* can **write** a *Post*.
 - h. If logged a *Normal user* can **modify** his *Posts*.
 - i. A *Normal user* can **modify/delete** his account.
6. Users that can **log in** as *Social moderator* can do all operation of a *Normal user* plus:
 - a. If logged as *Social moderator* can **delete** other users' comments.
 - b. If logged as *Social moderator* can **recruit** others *Social moderators*.
7. Users that can **log in** as *Moderator* can do all operation of a *Social moderator* plus:
 - a. If logged a *Moderator* can **add/delete/modify** a *Movie*.
 - b. If logged as *Moderator* can **recruit** other *Moderators*
8. Users that can **log in** as *Admins* can do all operation of a *Moderator* plus:

- a. If logged an *Admin* can **delete** another user's account.
- b. If logged as *Admin* can **recruit** other *Admins*.

NON-FUNCTIONAL

1. The focus of the application is the *quality* of the information provided to the users.
2. The application needs to be **consistent**, in order to provide correct information to all the users.
3. The transactions must be **monotonic**: every user must see the last version of the data and modifications are done in the same order in which they are committed.
4. The application needs to be *usable* and *enjoyable* for the user, therefore the system needs **limited response times**.
5. The *password* must be protected and stored *encrypted* for privacy issues.

USE CASES

SUGGESTIONS

The suggestions are shown only if the user is logged in. The suggestions can be found in the initial pages of the *browsers*, the page is filled with the suggestions from the highest priority to the lowest until exhaustion. If the suggestions are not enough to fill the page, the most recent films\users, that have not been already suggested, are chosen to complete it.

SUGGESTED FILMS

There are three levels of suggestions with different priorities:

- **Very Suggested:** They have the highest priority, given a user **U1** if **U1** is following user **U2** and **U2** is following a movie **F** and has also posted on **F**, then **F** is *very suggested* to **U1**.
- **Suggested:** They have the second priority level, if a user **U1** is following user **U2** and **U2** is following a film **F**, then **F** is *suggested* to **U1**.
- **Commented by Friend:** They have the lowest priority level, if a user **U1** follows a user **U2** who posted on a movie **F**, then **F** is suggested as "*commented by a friend*" at **U1**.

SUGGESTED USERS

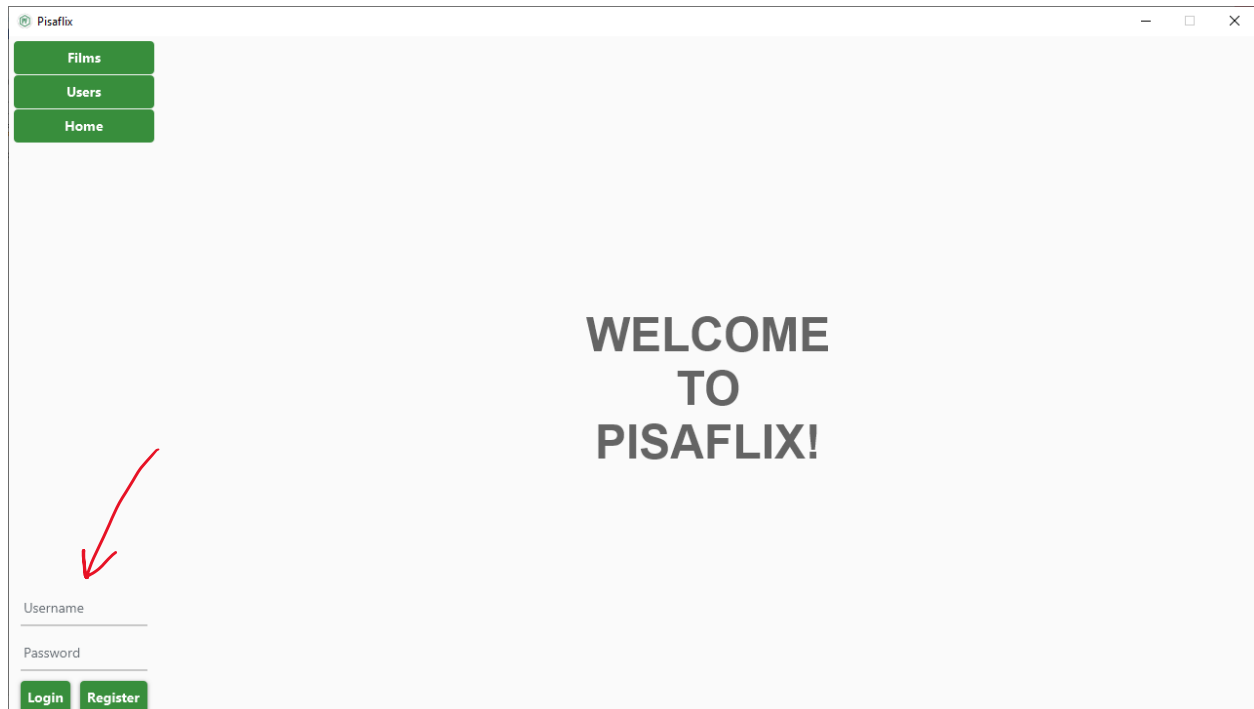
There are two levels of suggestions with different priorities:

- **Very Suggested:** They have the highest priority, given a user **U1** if **U1** is following user **U2** and **U2** is following user **U3**, then **U3** is *very suggested* to **U1**.
- **Suggested:** They have the lowest priority level, if a user **U1** is following user **U2** and **U2** is following a user **U3** and **U3** is following a user **U4**, then **U4** is *suggested* to **U1**.

The description of the queries related to these suggestions is present in the [Suggested Users and Movies](#) section.

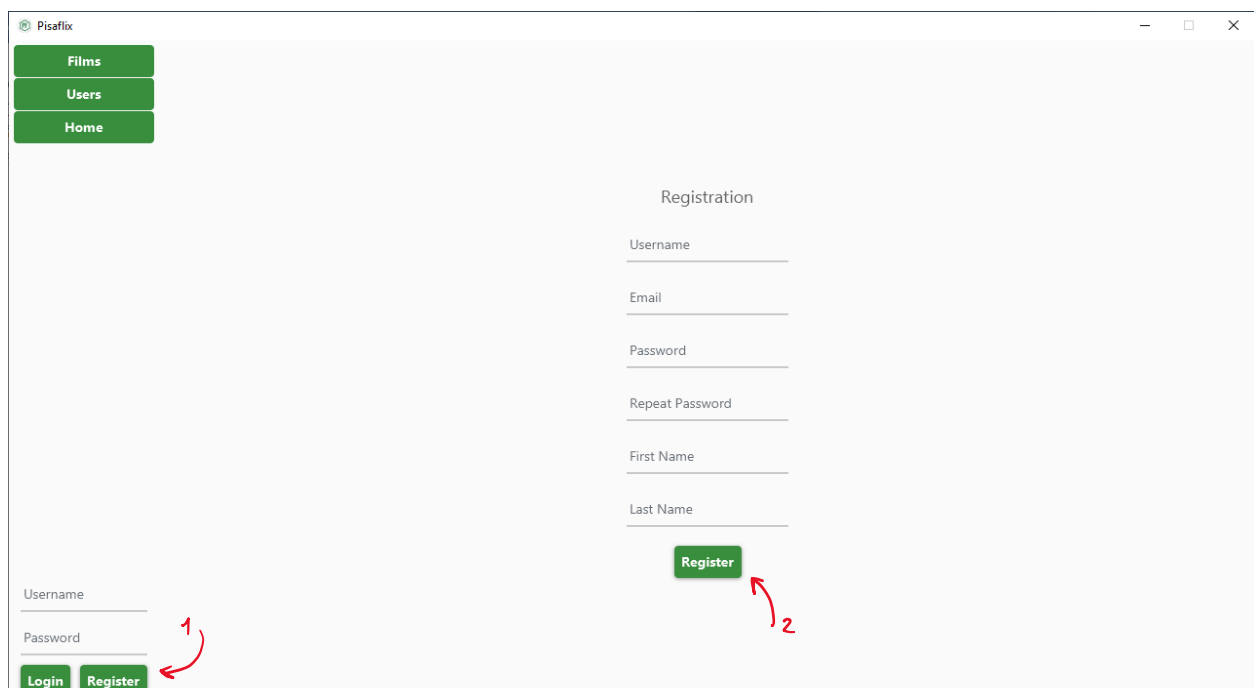
USER MANUAL

The graphic interface is divided in two sides; a menu on the left side and a space on the right side where the application pages will be displayed. Below the menu it is possible to log in by filling the apposite form:



REGISTRATION AND LOGIN

A new user can register by clicking the specific button (1) located in the bottom left corner. This will request the registration page which the user can fill up with his own information and then register (2):



The application will inform the user about any kind of issue after having clicked on the register button. The same is true for a successful registration:

Registration	Registration
Username	test
Email	tes@mail.com
Password
Repeat Password
First Name	test name
Last Name	test surname
Register	Register
Registration is done!	Passwords are different


Once registered, the user can log in with the credentials chosen by filling up the form in the bottom left corner. This is the welcoming page:

[Films](#)[Users](#)[Home](#)

WELCOME BACK TIZIO

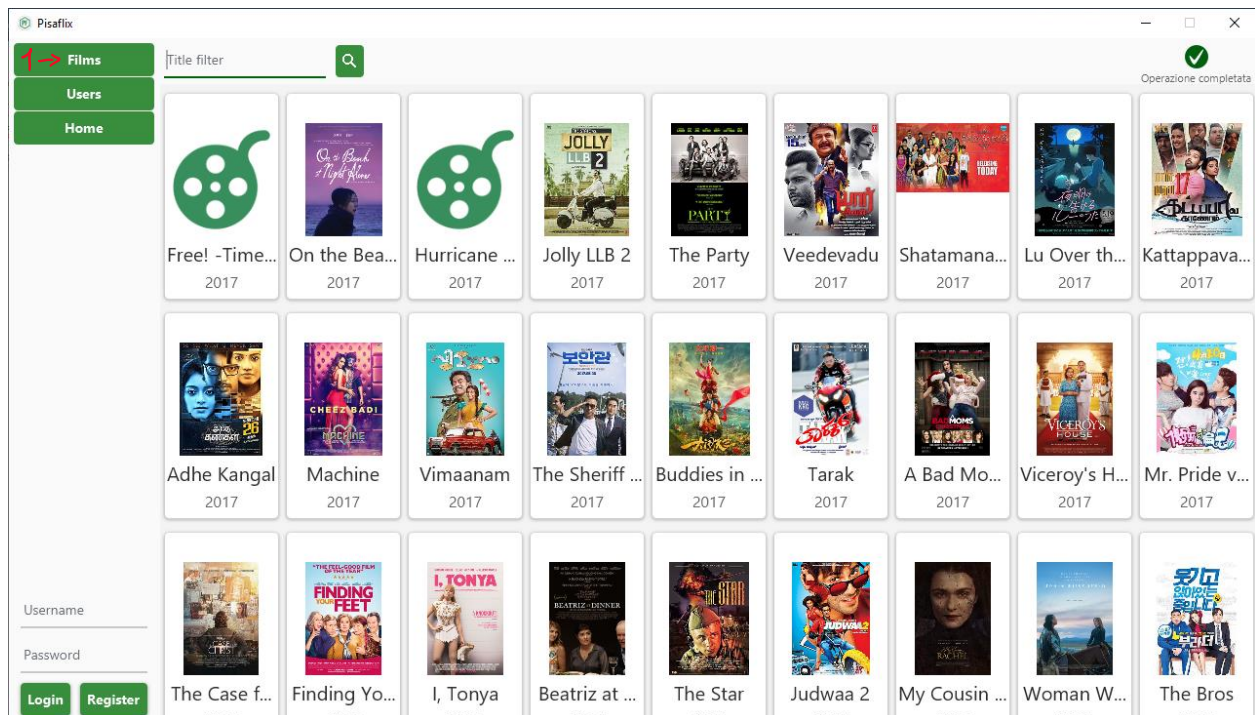
Logged as: tizio

[Logout](#)[Show Profile](#)

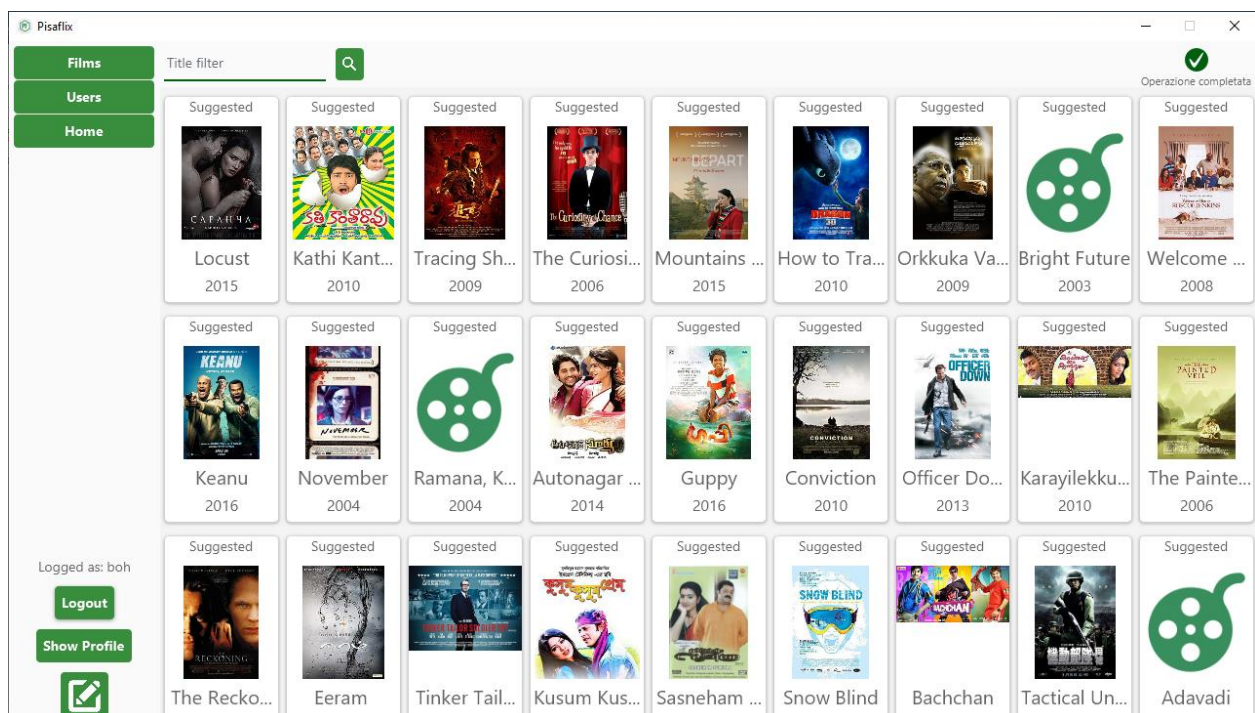


BROWSING FILM

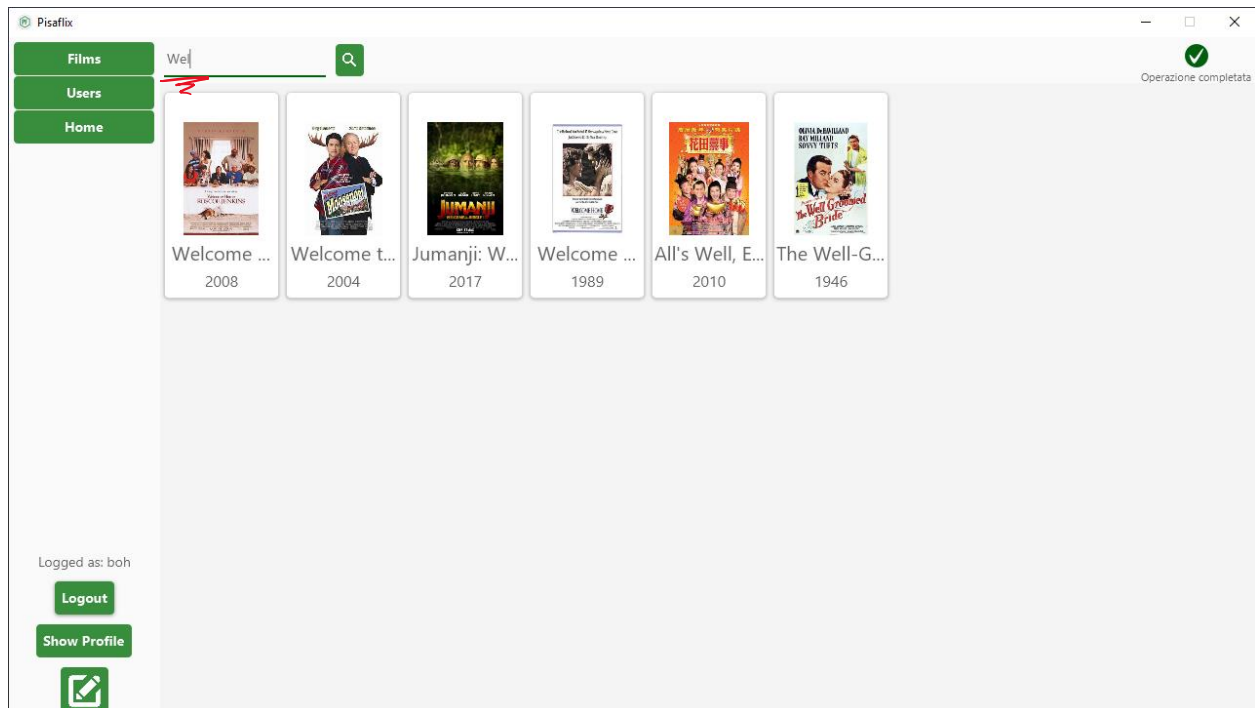
A user can browse (even without being registered) films by clicking the apposite bottom (1) in the top left corner:



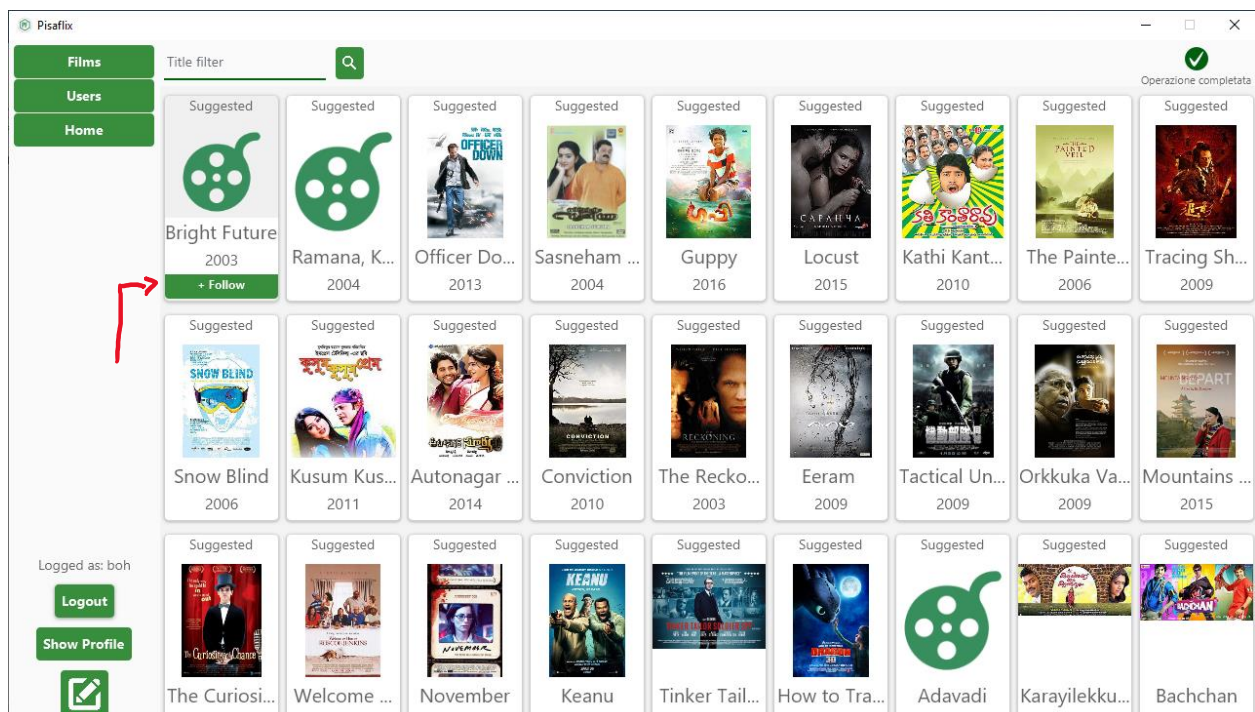
The appearance of this page will change if the user is logged due to the mechanism for suggesting films explained previously.



In the browse films the user can search for a specific item filtering by title:



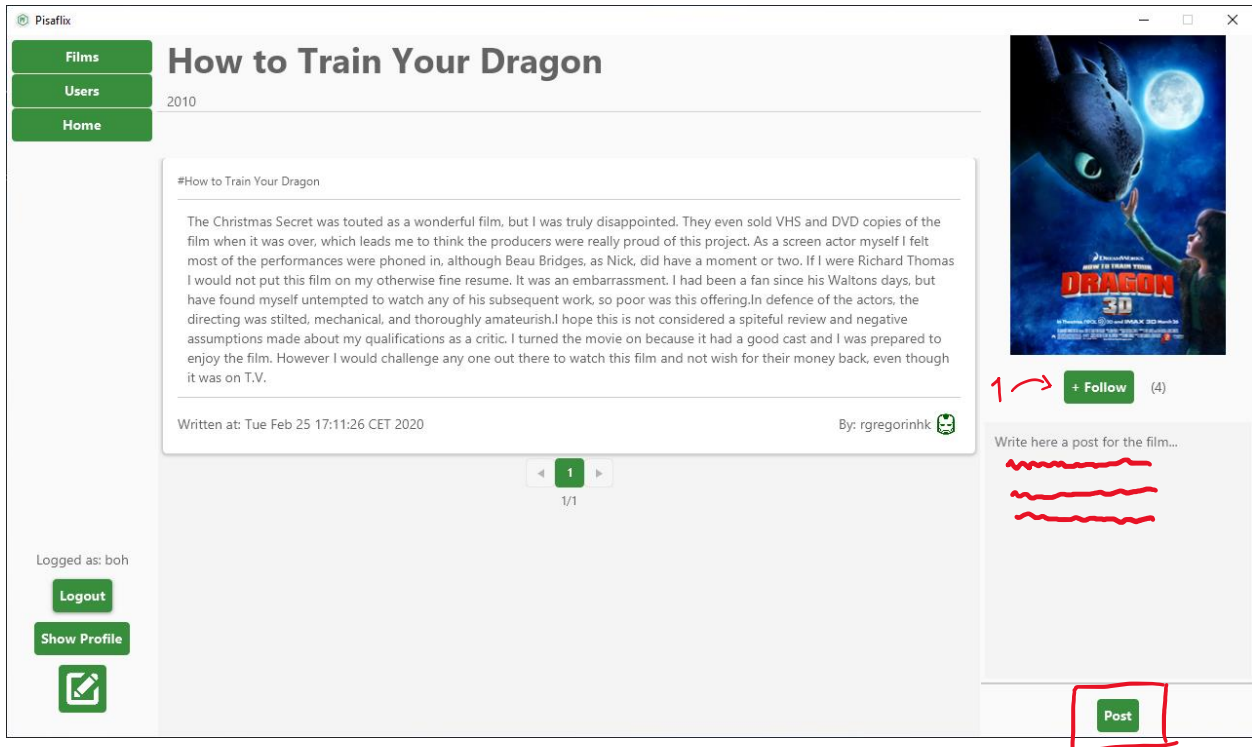
A logged user can also follow a film by simply passing the mouse over the card of a film card (which will reveal a button), and click the follow button:



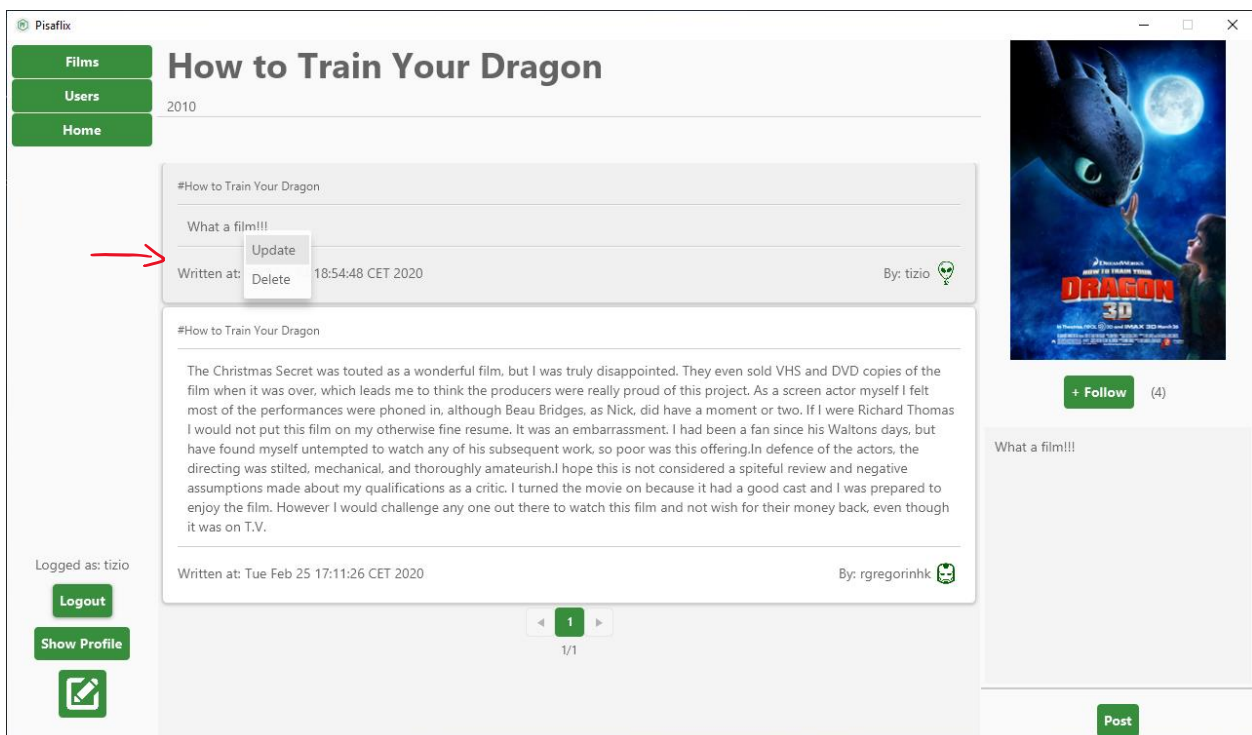
FILM DETAILS

After clicking on a film during browsing, the application will show the film detail page which contains all the information about it and also all the recent posts made by users.

In that page a user, if logged, can follow the film (1) (by clicking the apposite button in the right side of the application) or write a post about it:



Then the user can also modify/delete its own comments by right clicking on them:



To perform the update, click on update (1) once the change has been made:

The screenshot shows the 'How to Train Your Dragon' film page. On the left, there are navigation buttons: 'Films', 'Users', and 'Home'. The main content area displays a comment by 'tizio' with the text 'This film is GARBAGE!!!!'. Below the comment are 'cancel' and 'update' buttons. A red arrow points to the 'update' button, labeled with a red '1'. Below the comment is a detailed review by 'rregorinhk'. On the right, there is a movie poster for 'How to Train Your Dragon 3D' and a '+ Follow' button. At the bottom, there is a 'Post' button.

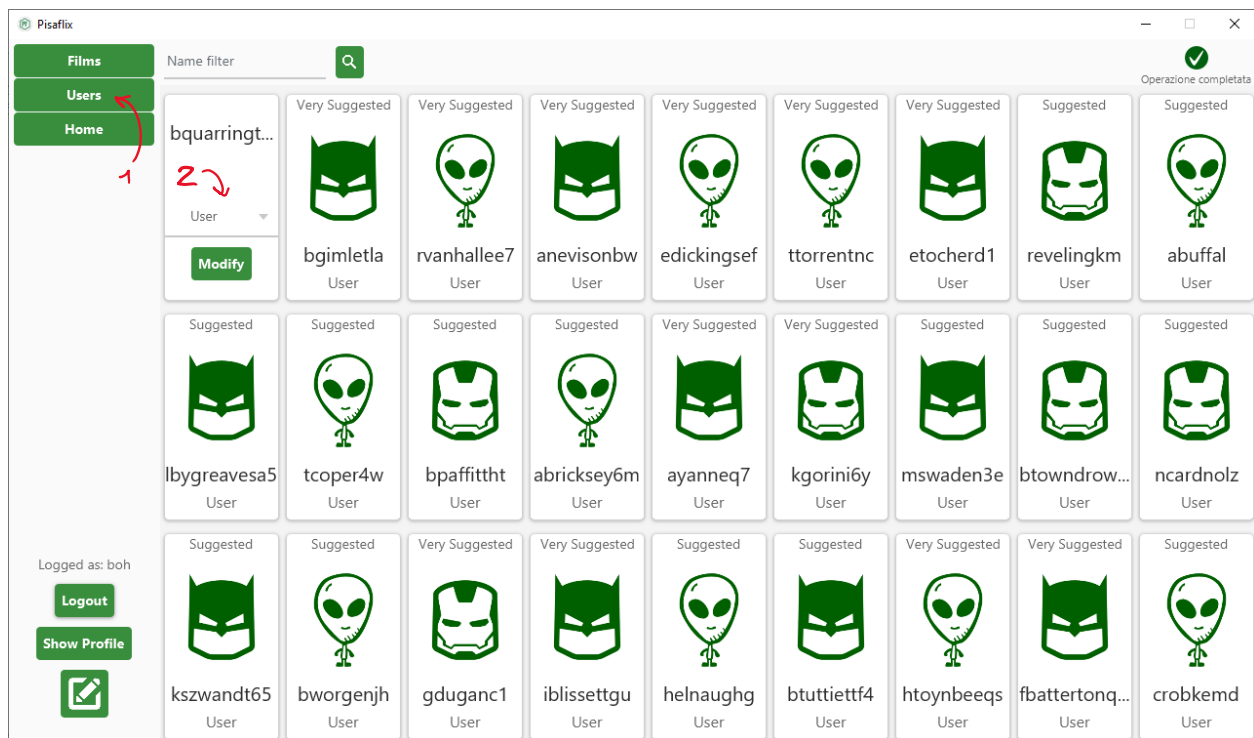
With the right privileges a user can also delete other users' comments, in the same way:

The screenshot shows the 'How to Train Your Dragon' film page. On the left, there are navigation buttons: 'Films', 'Users', and 'Home'. The main content area displays a comment by 'tizio' with the text 'This film is GARBAGE!!!!'. Below the comment is a 'Delete' button. A red arrow points to the 'Delete' button. Below the comment is a detailed review by 'rregorinhk'. On the right, there is a movie poster for 'How to Train Your Dragon 3D' and a '+ Follow' button. At the bottom, there is a 'Post' button.

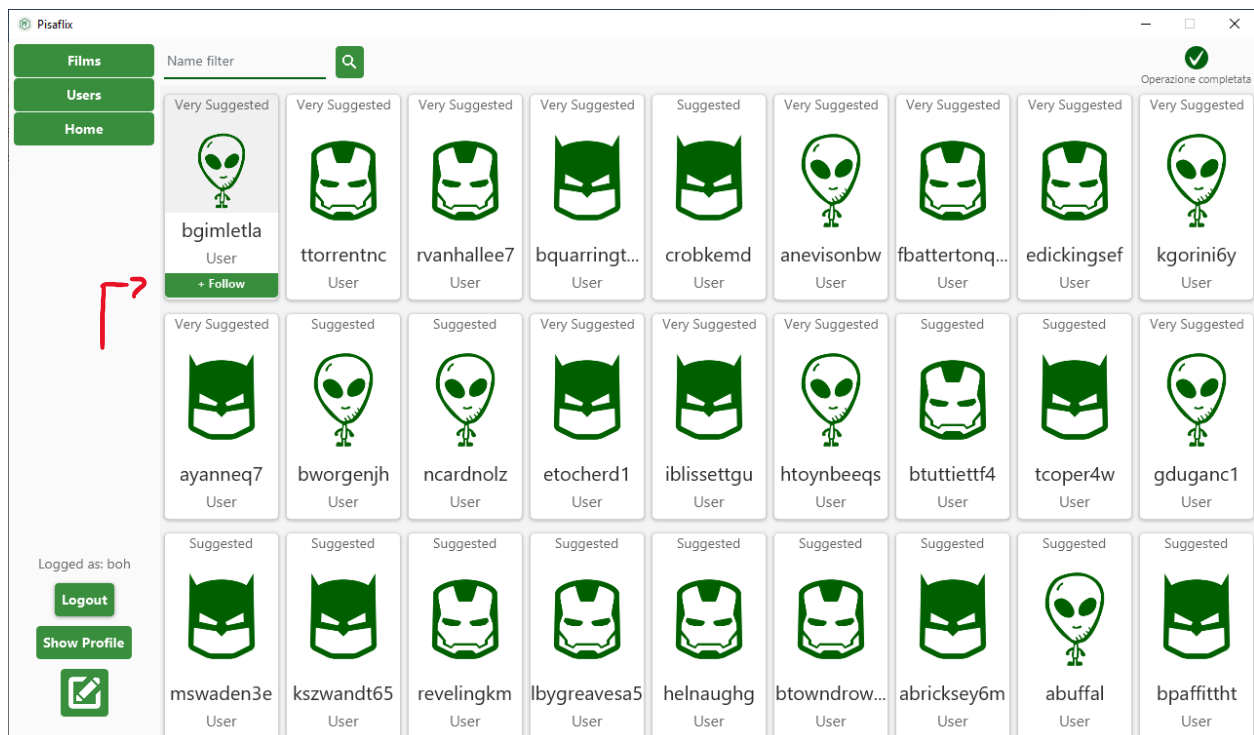
BROWSING USERS AND DETAIL PAGES

Similarly to films, a user can also navigate through other users by clicking the apposite button (1) in the top left corner, there it can see all usernames and privileges.

With the right privileges a user can modify other user's privileges by right clicking on them and using the apposite menu (2):



A logged user can follow another user by simply passing the mouse over the card of a user card (which will reveal a button), and click the follow button:



Once the user clicks on a user card while browsing, it will open his/her detail page. There you will find all the information related to the activities done by the specific user:

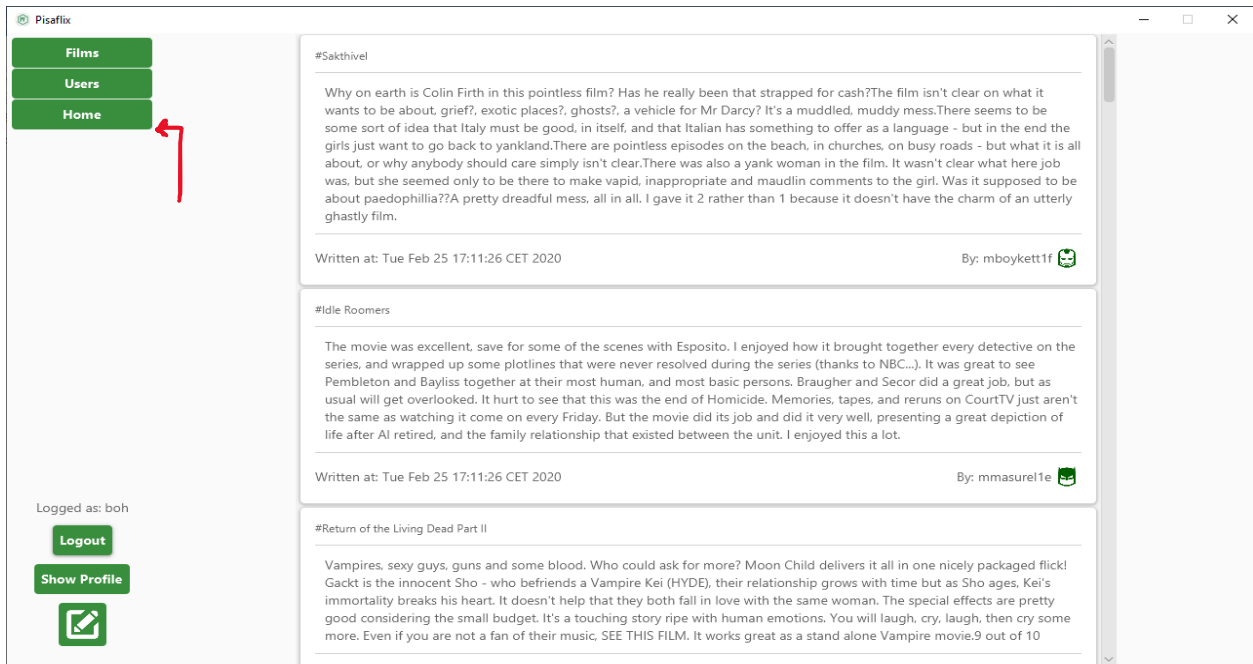
The screenshot shows the user detail page for 'abuffal'. On the left, there is a sidebar with buttons for 'Films', 'Users', and 'Home'. The main content area displays the user's name 'abuffal', their email 'Aurelie Buff', and their email address 'abuffal@tamu.edu'. There is a '+ Follow' button. To the right, there is a profile picture of Iron Man and a list of statistics: 3 Following User, 6 Following Film, 7 Follower, and 4 Post. Below this, there is a 'Post List' section showing two posts. The first post is titled '#Bliss' and the second is titled '#Trojan War'. At the bottom left, there is a 'Logged as: boh' section with buttons for 'Logout', 'Show Profile', and a pencil icon.

When browsing the user can also click on his own detail page, then he can modify (1) his information or delete (2) his account (the same page is accessible by the apposite button in the bottom left corner after the login (3)).

The screenshot shows the user detail page for 'boh'. On the left, there is a sidebar with buttons for 'Films', 'Users', and 'Home'. The main content area displays the user's name 'boh', their email 'rgbrtgb', and their email address 'boh@boh.boh'. There are two buttons: 'Update Profile' and 'Delete Profile'. Red arrows point to these buttons, with '1' pointing to 'Update Profile' and '2' pointing to 'Delete Profile'. To the right, there is a profile picture of Batman and a list of statistics: 8 Following User, 1 Following Film, 1 Follower, and 7 Post. Below this, there is a 'Post List' section showing three posts, all titled '#Wolf Warriors 2'. At the bottom left, there is a 'Logged as: boh' section with buttons for 'Logout', 'Show Profile', and a pencil icon. A red arrow points to the 'Show Profile' button, with '3' next to it.

BROWSING POSTS (HOME PAGE)

A logged user can see his/hers home page by clicking the apposite button on the top left corner. This page will contain a selection of the posts wrote by the users that he/she follows.



By clicking on the name of the user who wrote the post, or the name of the film tagged, we can reach their detail page directly.

WRITE POST

A logged user can write a post by clicking on the apposite button on the bottom left of the screen (1), write the post itself (2), search for films to tag (3), tag them by clicking the cards below (4), erase all tags selected so far (5) and finally publish the post (6):

