# myFlix web app

Angular frontend development process



September

2023

\*All usernames, passwords or other similar information shown in this presentation is fictive and for illustrative purpose only

### **TABLE OF CONTENTS**

Analyzing the project user stories, setting up a Kanban board and creating the web app user flow

Implementing the web app main view and profile page (for logged-in users), and routing between UIs

Creating the project using Angular
 CLI, configuring the files and
 creating an Angular service file to
 connect with the API

Final code revision, testing and design last adjustments

Creating user registration and user log in components / UIs

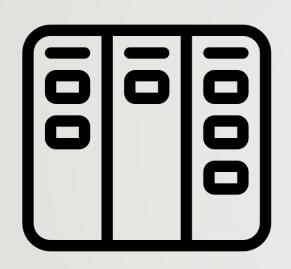
6 Deploying the app

### **TABLE OF CONTENTS**

07

Creating all the necessary documentation

## 01



Analyzing the project user stories, setting up a Kanban board and creating the web app user flow

Skills used

Project management
Analytical thinking
Visual communication (schemas)

### WHY WAS THIS STEP IMPORTANT

Analyzing the user stories is essential to pinpoint the exact features that need to be implemented in a product, and thus fulfil stakeholders and users expectations.

Knowing how to work with Kanban is also important, since it's a project management method widely used in various work environments. Kanban is interesting since it's based on simple visuals and allows tasks to be presented in a clear and effective way. It is therefore a useful project management and monitoring tool, especially in coding.



### **WHAT** WAS THE GOAL

Analyzing each user story (2) and note down the technical requirements and functionalities needed to meet the desired results.

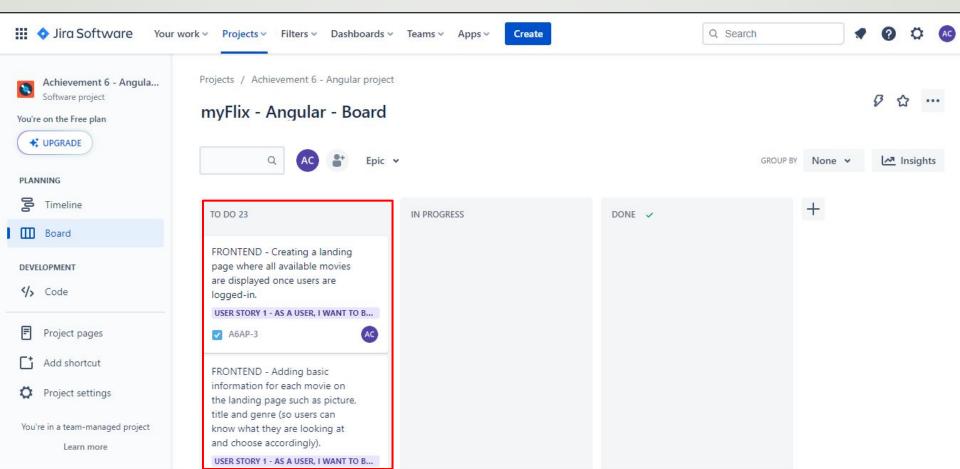
Migrating the technical requirements extracted from the project's user stories into Kanban cards / tasks (in Jira) to structure and align the project from the beginning to the end (see images on next slides).

Adding story points to each card based on the expected effort required.

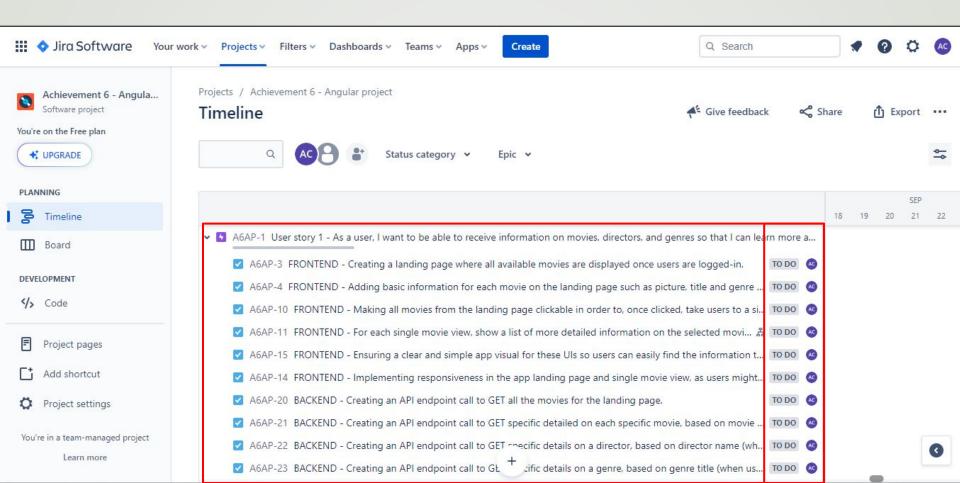
Creating the user flow on myFlix Angular (see images on next slides).

 The goal was to, based on the user stories, show the steps users have to complete to achieve their end goal while using the web app.

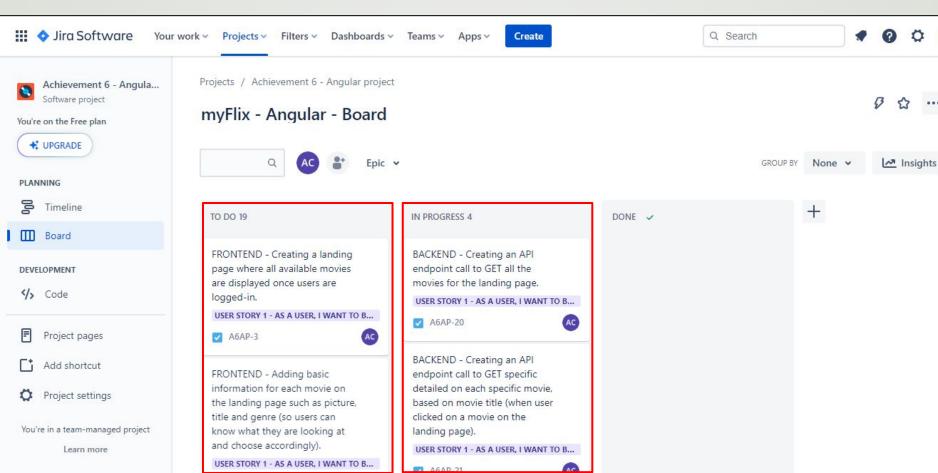
### KANBAN BOARD AT THE BEGINNING OF THE PROJECT



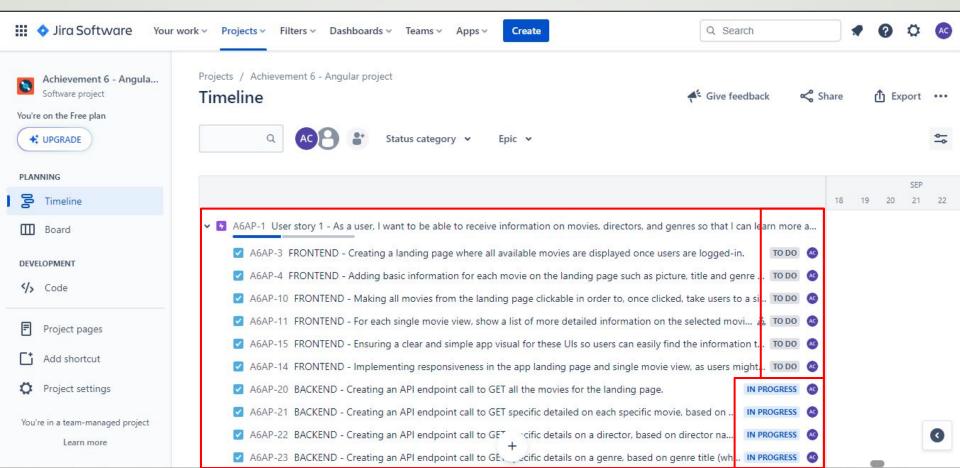
### KANBAN TIMELINE AT THE BEGINNING OF THE PROJECT



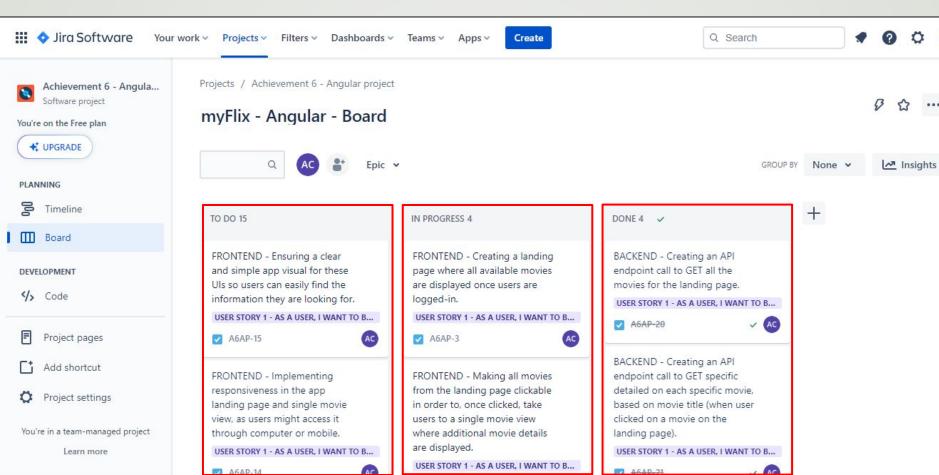
### **KANBAN BOARD** IN PROGRESS



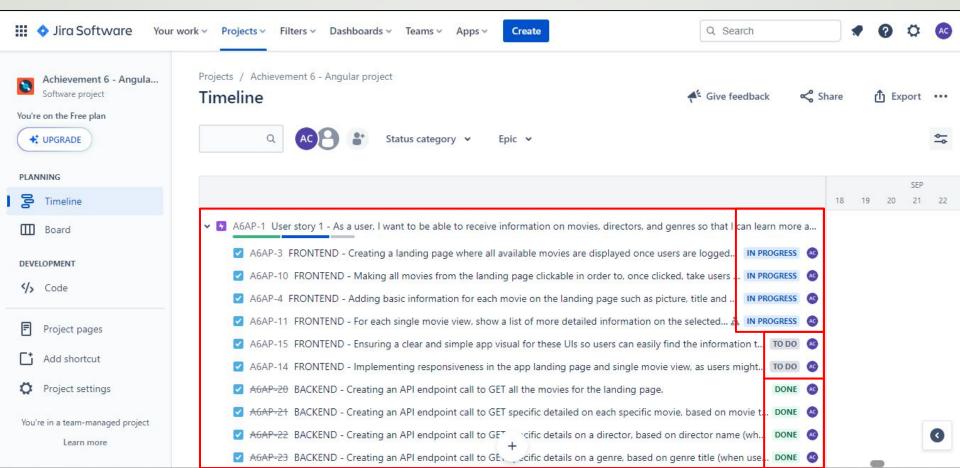
### **KANBAN TIMELINE IN PROGRESS**



### **KANBAN BOARD** IN PROGRESS



### **KANBAN TIMELINE IN PROGRESS**



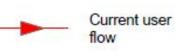
### User flow 1

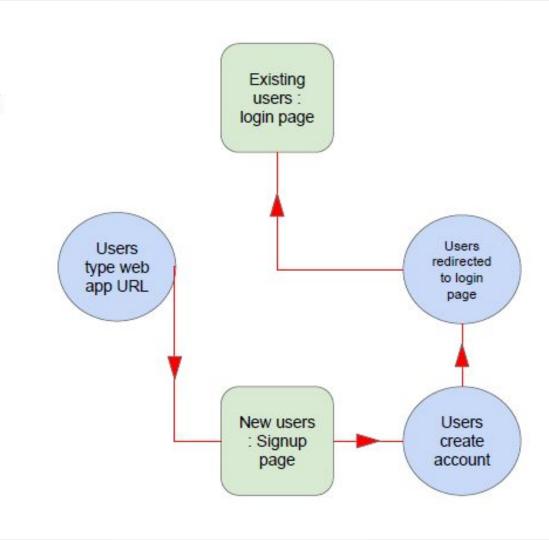
As a user, I want to be able to create a profile so I can save data about my favorite movies.

### Legend

Users action

App UI





### User flow 2

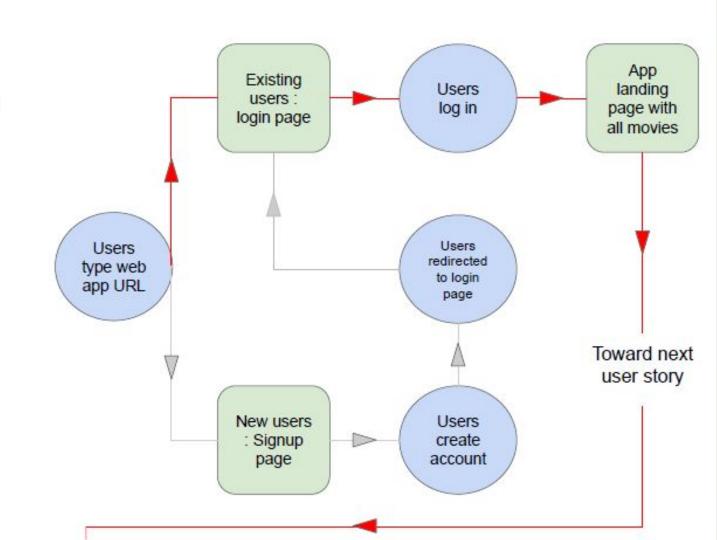
As a user, I want to be able to create a profile so I can save data about my favorite movies.

## Legend

Users action

App UI

Current user flow



### User flow 3

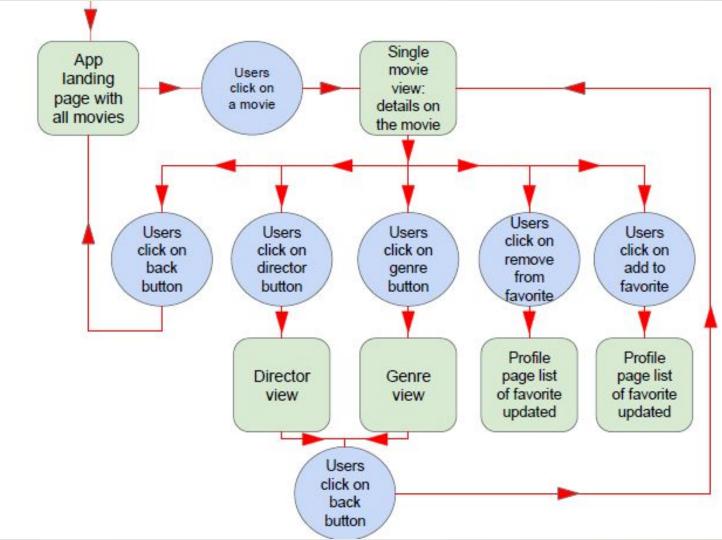
As a user, I want to be able to receive information on movies, directors, and genres so that I can learn more about movies I've watched or am interested in.

## Legend

Users action

App UI

Current user flow



## CHALLENGES OR SPECIAL POINTS OF CONSIDERATION

This first step was familiar to me, because I already had experience in handling project management software (e.g.: Asana) as well as analyzing user stories.

### **DECISION** MADE

I chose the project management tool used for the project (in this case - Jira). I also decided how to formulate and present the tasks for the projects in the Jira's cards, and added their story points.



Creating the project using Angular CLI, configuring the files and creating an Angular service file to connect with the API

Skills used

Research Problem-solving Debugging

### WHY WAS THIS STEP IMPORTANT

Organizing the development and the coding environment for efficient and well-oriented work from the beginning is one of the keys to ensure smooth workflow and limit avoidable time loss due to inefficient project initialization.

As for the Angular service, it was essential to create it to ensure communication between the frontend and the backend of the web app.

### WHAT WAS THE GOAL

Creating the project by running \$ ng new myFlix-Angular-client in the Angular CLI (which is similar to running create-react-app in React, except for Angular in this case).

Setting up and configuring Angular HttpClient (with Angular HttpClientModule) to ensure the web app is able to communicate and fetch data from the movie API.

Writing codes to load the data from the API:

- In the newly *fetch-api-data.service.ts* created, I've added the necessary imports (*HttpClient*, *HttpHeaders*, *HttpErrorResponse*, etc.).
- I then implemented in this same file the codes used to make the calls from myFlix to each endpoint in the backend API (see examples on the next slides).

### **CODE CALLING** THE ENDPOINT ALLOWING TO GET ALL MOVIES

```
getAllMovies(): Observable<any> {
  const token = localStorage.getItem('token');
  return this.http.get(apiUrl + 'movies', {
   headers: new HttpHeaders(
       Authorization: 'Bearer' + token,
  }).pipe(
    map(this.extractResponseData),
    catchError(this.handleError)
  );
```

### **CODE CALLING** THE ENDPOINT ALLOWING TO ADD FAVORITE MOVIES

```
userAddFavoriteMovie(Username: string, MovieID: string): Observable<any> {
 const token = localStorage.getItem('token');
 const headers = new HttpHeaders({
   Authorization: 'Bearer' + token,
 });
 const requestBody = {};
 return this.http.post(apiUrl + 'users/' + Username + '/movies/' + MovieID, requestBody, { headers }
    .pipe(
     map(this.extractResponseData),
     catchError(this.handleError)
    );
```

## **CHALLENGES** OR SPECIAL POINTS OF CONSIDERATION

At first, I realized that there was a missing endpoint in the backend, considering the list of calls from the frontend that needed to be implemented. It was therefore impossible to call this specific endpoint from the frontend.

To fix this, I went back to my backend code, and I created a new endpoint. I carried out various tests to ensure that it was working properly. I was then able to connect my frontend service to this new endpoint, thus ensuring to keep meeting all the project requirements.

## 03



**Creating** user registration and user log in components / UIs

### Skills used

Research
Problem-solving
Code writing
Debugging

### WHY WAS THIS STEP IMPORTANT

Implementing and rendering a sign up and a log in logic / views was important to ensure users have a mean to access the content displayed inside the web app (and reserved to authenticated users).

### WHAT WAS THE GOAL

Creating a sign up and log in component using \$ ng generate component user-registration-form and \$ ng generate component user-login-form.

Implementing the codes in the newly TypeScript (.ts) file created for the sign up and log in process respectively.

(suite on next slide)

## WHAT WAS THE GOAL (SUITE)

Updating the HTML file for the sign up and log in respectively, to ensure a simple and clear view is rendered in users' welcome page for both components.

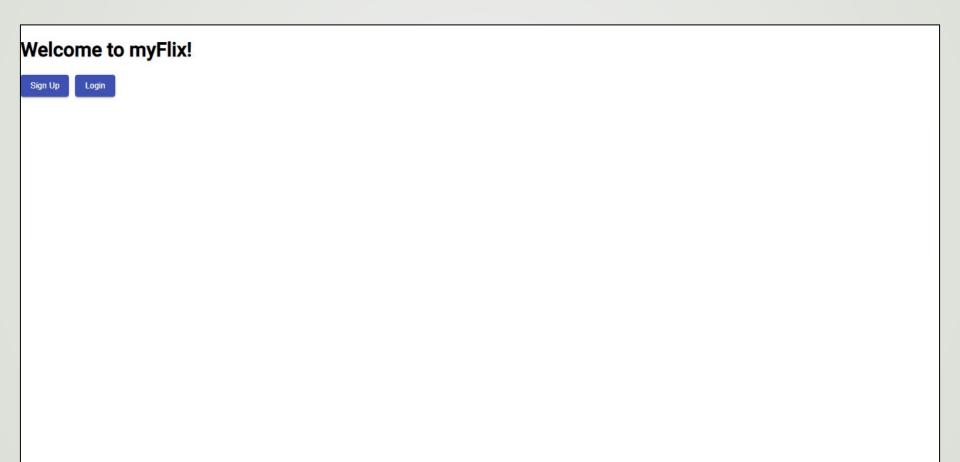
• Angular's binding syntax and directives, such as *NgModel*, have also been added in the HTMLs to establish communication between the TypeScript files and the HTML files.

Polishing up the UIs for the welcome page / sign up view / log in view with Angular Material.

 For example, sign up form and log in form in users screen are shown using dialog box from Angular Material (similar to modal in Bootstrap) (see next images).

Running tests to ensure sign up and log in process are working as expected and that, once logged-in, current user and related token are stored correctly in localStorage.

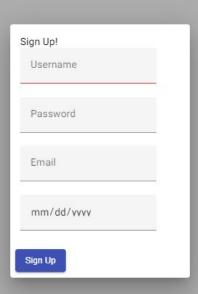
## FIRST RENDERED VIEW - WELCOME PAGE (NO STYLING)



## FIRST RENDERED VIEW - SIGN UP FORM (NO STYLING)

### Welcome to myFlix!



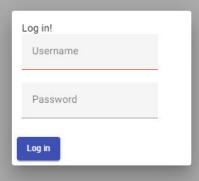


## FIRST RENDERED VIEW - LOG IN FORM (NO STYLING)

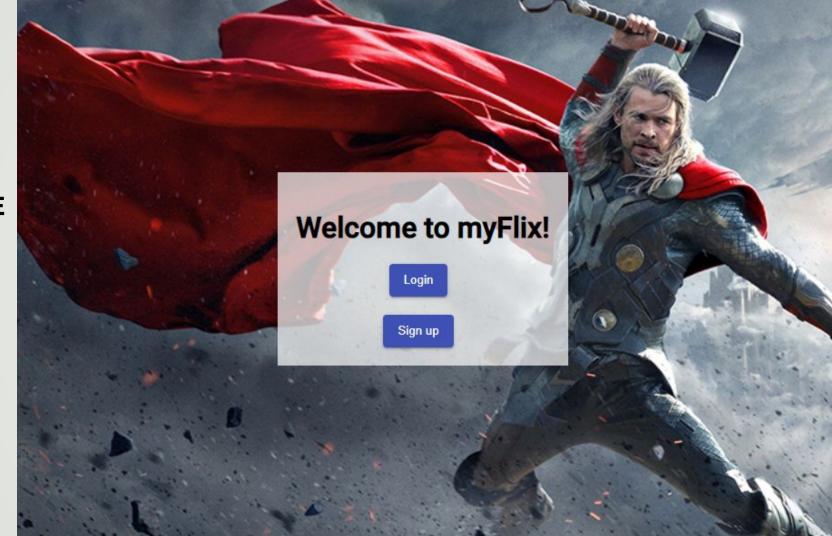
### Welcome to myFlix!













### Sign up!

#### Username

Username must be at least 5 characters long and contain only alphanumerical characters.

### Password

Password can contain alphanumeric and non-alphanumeric characters.

### Email

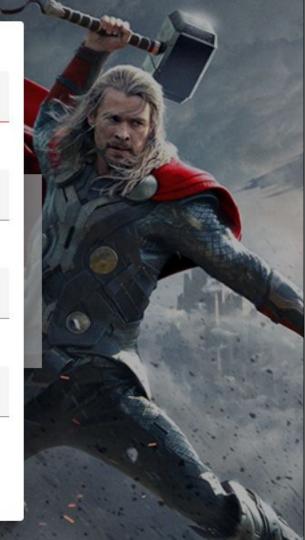
Email must be in the following format : abc@domain.abc.

### Birthday

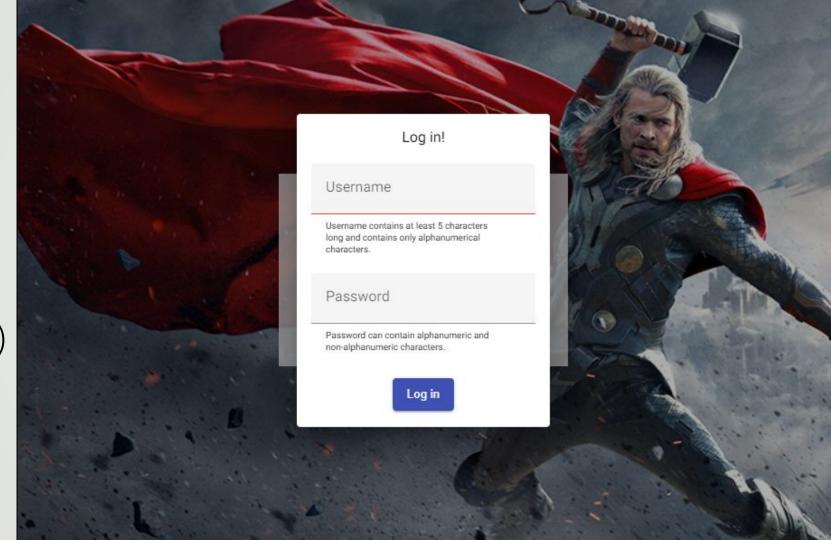


Birthday is optional. If you want to add it, pick your birthday from the calendar icon.

Sign up



LOG IN
FORM
(WITH
STYLING)



## 04



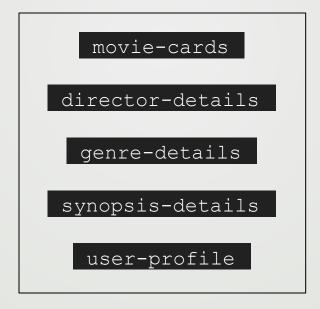
Implementing the web app main view and profile page (for logged-in users), and routing between UIs

Skills used

Research
Problem-solving
Code writing
Debugging

### **WHY** WAS THIS STEP IMPORTANT

This step was important to implement the actual core codes and views of the web app. Without it, myFlix wouldn't have had any movie to display and no profile page on which users could have consulted their information and update it, which would have make the product pointless.



### **WHAT** WAS THE GOAL

Creating the main view (displaying all movie cards) on which users land after logging in successfully. To do so, I:

- Created the main view component
- Wrote codes in the main view TypeScript file to fetch the movies from the API
- Wrote codes in the main view HTML file to display the movies fetched from the API on the users' screen
- Added an action bar below each movie card with different links to display, in dialogs and based on users interaction, movie director details, movie genre details and movie synopsis details. A favorite button has also been added (see images on next slides)
- Ensuring responsiveness and consistent styling / color palette with Angular Material for a great experience on any device sizes.

Creating the navigation bar at the top of the website. To do so, I:

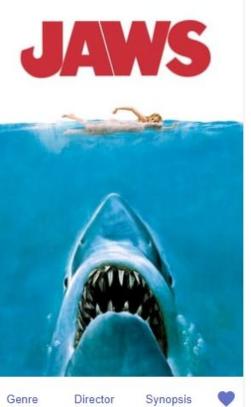
- Added the myFlix logo
- Listed all available pages to navigate
- Added the logout function

### FIRST RENDERED VIEW - MAIN VIEW ON LARGE SCREENS (NO STYLING)

Menu myFlix Jurassic Park Coach Carter Gladiator Silence of the Lamb: Jaws Directed by: Steven Spielberg Directed by: Thomas Carter Directed by: Ridley Scott Directed by: Steven Spielberg Directed by: Jonatha JAWS The silence o GLADIATOR COACH CARTER Director Synopsis Director Synopsis Director Synopsis Director Synopsis Director Sy

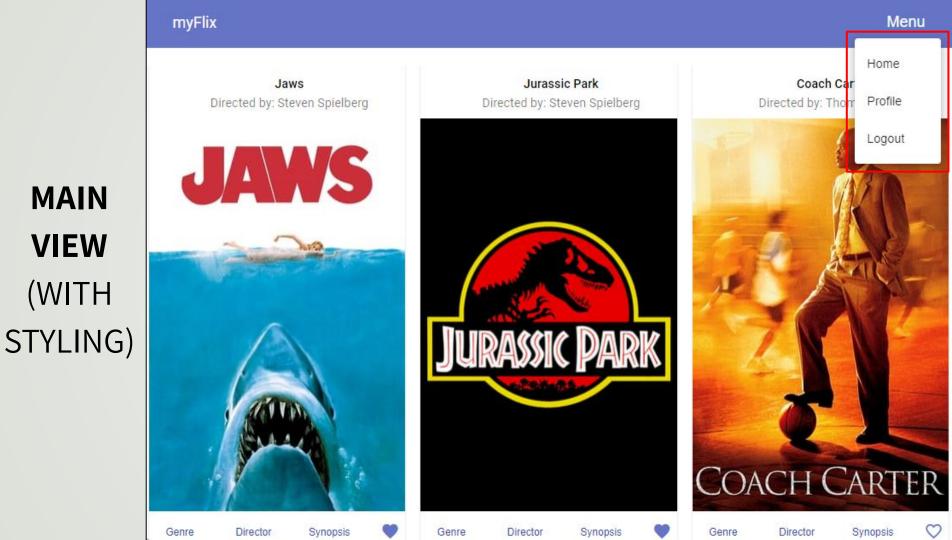
Menu myFlix Coach Carter Jaws Jurassic Park Directed by: Steven Spielberg Directed by: Steven Spielberg Directed by: Thomas Carter JAWS

**MAIN VIEW** ON LARGE **SCREENS** (WITH STYLING)









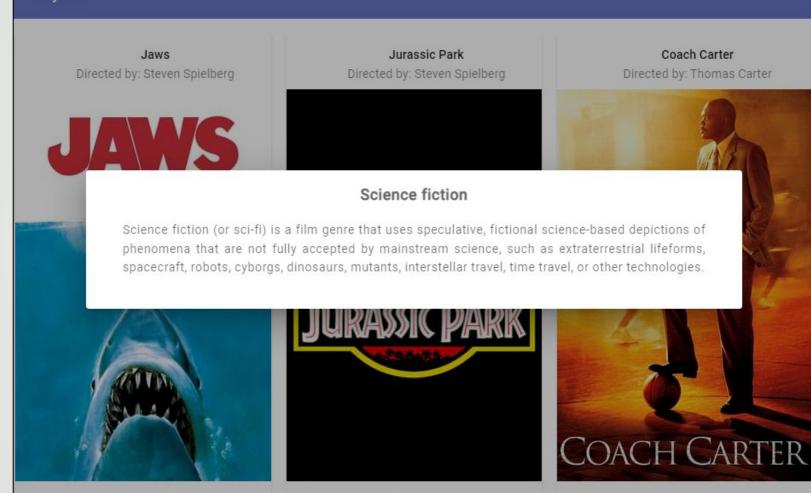
## MAIN VIEW

MOVIE GENRE DETAILS

Director

Genre

Synopsis



Director

Genre

Synopsis

Genre

Director

Synopsis

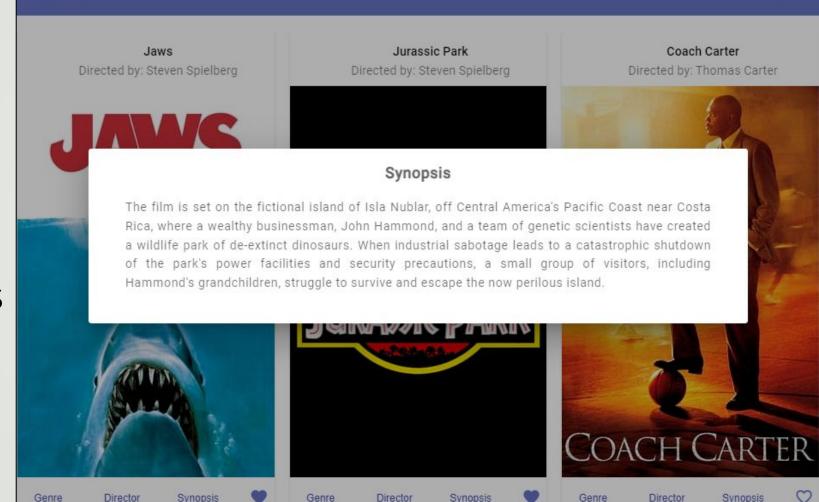
Menu myFlix Jurassic Park Coach Carter Jaws Directed by: Steven Spielberg Directed by: Steven Spielberg Directed by: Thomas Carter MAIN Steven Spielberg **VIEW** Biography: Steven Spielberg is an American filmmaker and a major figure of the New Hollywood era. Date of birth: 12/18/46 **MOVIE DIRECTOR** Date of death: NA **DETAILS** COACH CARTER Director Synopsis Genre Director Synopsis Genre Director Synopsis Genre

## MAIN **VIEW**

MOVIE **SYNOPSIS DETAILS** 

Genre

Director



Director

Director

Genre

Menu myFlix Jurassic Park Coach Carter Jaws Directed by: Thomas Carter Directed by: Steven Spielberg Directed by: Steven Spielberg **MAIN VIEW** Coach Carter has been successfully added to your list of favorite!

ADD TO FAVORITE

Director

Genre

Synopsis



# MAIN VIEW

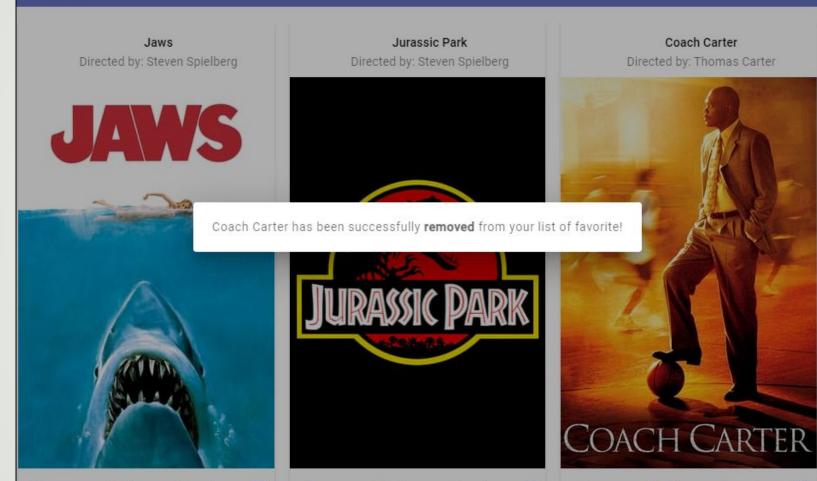
REMOVE FROM FAVORITE

Genre

Director

Synopsis

Genre



Director

Synopsis

Genre

Director

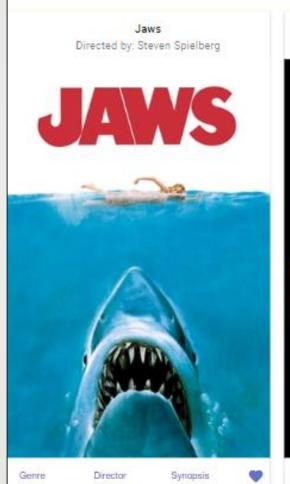
Synopsis

## **MAIN VIEW**

RESPONSIVE FOR MEDIUM SCREENS

myFlix Menu

Genre



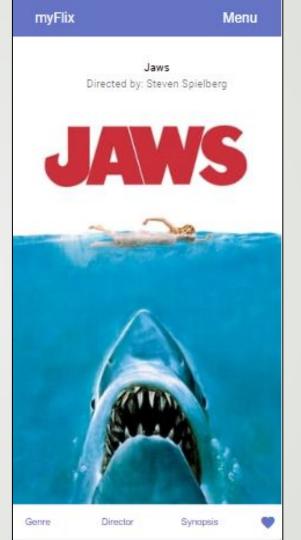


Director

## **MAIN VIEW**

\_

RESPONSIVE FOR SMALL SCREENS



# WHAT WAS THE GOAL (SUITE)

Creating the profile page for users to be able to consult their info and update their account. To do so, I:

- Repeated some steps done in the main view UI creation (creation of a component and wrote codes in the TypeScript and HTML files)
- Implemented logic to display users information, allow users to update their account (username, password, email and birthday) or delete it, and show movies that have been added to the favorite.
   I also added some codes to ensure users can remove movies from their favorite from within their profile page, and update the list of favorite movies accordingly in real time.
- Implemented logic to ensure that users' actions (e.g: movie added to favorite) remains between session, so that users can go back on their account and always see / access the movies they've listed as favorite in previous sessions.
- Ensuring responsiveness and consistent styling / color palette with Angular Material for a great experience on any device sizes.

## FIRST RENDERED VIEW - PROFILE PAGE (NO STYLING)

### **User Profile**

Name: Testuser

Email: Testuser@gmail.com

Favorite movies:

## FIRST RENDERED VIEW - PROFILE PAGE (NO STYLING)

#### **User Profile**

Name: Testuser

Email: Testuser@gmail.com

Favorite movies:

urassic Park

Directed by: Steven Spielberg



remove from favorite

## FIRST RENDERED VIEW - PROFILE PAGE (NO STYLING)

myFlix

### **User Profile**

#### User information

Name: Testuser

Email: Testuser@gmail.com

#### **Edit information**

Username

Username must be at least 5 characters long and contain only alphanumerical characters.

Password

Password can contain alphanumeric and nonalphanumeric characters. Email

Email must be in the following format: abc@domain.abc.

Birthday

Birthday is optional. If you want to add it, pick your birthday from the calendar icon.

Update

#### Delete information

Delete account

Favorite movies:

## PROFILE PAGE ON LARGE SCREENS (WITH STYLING)

myFlix Menu

#### User profile

#### **User information**

Name: Youpi Email: youpi@hotmail.com

If you want to update your information, please fill in the update form.

All fields must be completed. If you only want to change some information, enter your current information you want to keep in the corresponding field (e.g. username) along with the information you want to change in the other field(s).

#### **Edit information**

At least 5 characters long and only alphanumerical characters.

Can co alphan

Email Birth

Email must be in the following format : abo@domain.abc.

Password

Can contain alphanumeric / nonalphanumeric characters.

Birthday (

Birthday is optional. If you want to add it, use the calendar icon.

Update

#### Delete account

Want to leave us?

By deleting your account, your data will be permanently deleted, and you will have to create a new account if you wish to return.

Delete account

#### **Favorite movies**

Move from side to side to see all movies (when many movies in favorite)

#### Jaws

Directed by: Steven Spielberg

#### Jurassic Park

Directed by: Steven Spielberg

#### Gladiator

Directed by: Ridley Scott

#### Silence of the Lambs

Directed by: Jonathan Demme

#### Blood diamond

Directed by: Edward

\_

# RESPONSIVE FOR MEDIUM SCREENS (PART 1)

myFlix Menu

### User profile

User information

Name: Youpi Email: youpi@hotmail.com

If you want to update your information, please fill in the update form.

All fields must be completed, if you only want to change some information, enter your current information you want to keep in the corresponding field (e.g.

#### **Edit information**

Email  Broad must be in the following	Birthday	in weet to
Femali	Distributan	
At least 5 characters long and only alghanumerical characters.	Cen contain alghenumeric / non- alghenumeric characters.	
Username	Password	

RESPONSIVE FOR MEDIUM SCREENS (PART 2)

#### Delete account

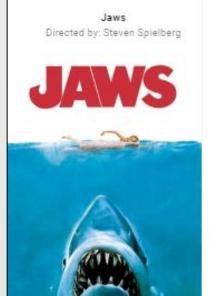
Want to leave us

By deleting your account, your data will be permanently deleted, and you will have to create a new account if you wish to return.

Delete account

#### **Favorite movies**

Move from side to side to see all movies (when many movies in favorite)







# RESPONSIVE FOR SMALL SCREENS (PART 1)

myFlix

### User profile

Menu

#### User information

Name: Youpi Email: youpi@hotmail.com

If you want to update your information, please fill in the update

All fields must be completed, if you only want to change some information, enter your current information you want to keep in the corresponding field (e.g. username) along with the information you want to change in the other field(s).

#### **Edit information**

Scroll down to complete all the form

#### Username

At least 5 characters long and only alphanumerical characters.

#### Password

Can contain alghanumeric / nonalghanumeric characters.

Update

RESPONSIVE FOR SMALL SCREENS (PART 2)



# WHAT WAS THE GOAL (SUITE)

Implementing routing between the different views (with *RouterModule*) to redirect users when certain actions are triggered (e.g. users are redirected to the welcome view when they delete their account). The three routes implemented are:

- /welcome
- /movies
- /user-profile

## **DECISIONS** MADE

I chose how to structure and present the visuals (fonts, colors, buttons, dialogs, etc.) of the welcome view, the main view and the profile page, for all screen sizes.



# 05



# Final code **revision**, **testing** and design **last adjustments**

Skills used

Critical thinking Synthetization

## WHY WAS THIS STEP IMPORTANT

Ensuring that the codes are optimized, that the web app passes all the tests and that the final product is in its best visual version was a logic thing to do for a sound deployment.

## WHAT WAS THE GOAL

Reviewing each code to make sure everything was optimized as much as possible in order to facilitate future modifications, additions or adjustments to the web app.

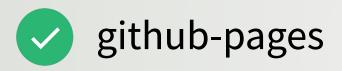
Carrying out several tests on all the functionalities of the web app to ensure that it works perfectly.

Adjusting some final design details to ensure professional looking.

# **CHALLENGES** OR SPECIAL POINTS OF CONSIDERATION

I positioned myself from the point of view of future colleagues who could work on my project. How can I make my project and my codes as clear as possible to promote its easy appropriation? I reviewed each file to bring improvements in certain places where I thought it could be useful.

# 06



**Deploying** the web app

Skills used

\_

# WHY WAS THIS STEP IMPORTANT

This step was essential to ensure that the web app can be used and accessed by everyone.

# WHAT WAS THE GOAL

Deploying the app to gh-pages and make it available for everyone.

# **CHALLENGES** OR SPECIAL POINTS OF CONSIDERATION

Since I had previously implemented a CORS protection measure in my backend code, I had to add the new gh-pages domain of myFlix Angular in my backend's list of authorized domains, in order to ensure that the API would authorize the requests routed to it instead of blocking them.



**Creating** all the necessary documentation

Skills used

Technical writing Communication

## WHY WAS THIS STEP IMPORTANT

Adequate and complete documentation on a project, from the comments inside the codes to the creation of a README resource, usually greatly facilitate future updates, better and shared understanding within teams, and easier project appropriation by new members, among other things. It was therefore important to carry out such task.



## WHAT WAS THE GOAL

Preparing two of my projects for handoff to other developers - my myFlix backend API and my myFlix frontend Angular. To do so, I:

- Inserted meaningful comments where necessary in my projects files
- Generated documentation for myFlix backend using JSDoc (see image next slides)
- Generated documentation for myFlix Angular frontend using TypeDoc (see image next slides)
- Created a README on the project's Github repository (see image next slides)

```
    * @fileoverview passport.js

  @description This file contains the logic that handles two authentication strategies: local (usernar
const passport = require('passport'),
   LocalStrategy = require('passport-local').Strategy,
   Models = require('./models.js'),
   passportJWT = require('passport-jwt');
let Users = Models.User,
   JWTStrategy = passportJWT.Strategy,
   ExtractJWT = passportJWT.ExtractJwt;
passport.use(new LocalStrategy(
       usernameField: 'Username',
       passwordField: 'Password'
                                                                          - myFlix backend -
                                                                    COMMENTS WRITTEN IN JSDOC
    (username, password, callback) => {
                                                                     FORMAT TO GENERATE JSDOC
       console.log(username + ' ' + password);
                                                                   DOCUMENTATION AUTOMATICALLY
       Users.findOne({ Username: username })
                                                                           (SEE NEXT IMAGE)
           .then((user) => {
```

## myFlix JSDoc DOCUMENTATION AUTOMATICALLY GENERATED

## Home

## auth.js

This file contains the API logic for user login, including authentication using Passport and emission of JWT tokens upon users successful login. It has one POST endpoint: /login.

Source:

auth.js, line 1

### index.js

This file constitutes the main API element. All endpoints are defined there, as well as their specific parameters, what they require and what information they return. Endpoints summary (12 in total):

- -6 GET
- -1 PUT
- -3 POST
- -2 DELETE

### Home

#### Global

addFavoriteMovies

createUser

deleteFavoriteMovies

deleteUser getDirector

getGenre

gerdenn

getMovies

getOneMovie getUserInfo

rootDirectory

updateUser userLogin

This file also contains the codes to import other project files (eg: auth.js which contains the logic for log in or passport.js which contains the logic related to JWT) as well as codes that configure certain additional elements, such as cross-origin resource sharing (CORS).

```
@module fetch-api-service
   @remarks
   This component regroups all the logic and function to call the different API's endpoints. Specific
 * This component include several requests/functions:
   -6 GET requests
   -1 PUT request
   -3 POST requests
   -2 DELETE requests
import { Injectable } from '@angular/core';
import { catchError } from 'rxjs/operators';
import { HttpClient, HttpHeaders, HttpErrorResponse } from '@angular/common/http';
import { Observable, throwError } from 'rxjs';
import { map } from 'rxjs/operators';
* Declaring the api url that will provide data for the client
                                                                     - myFlix frontend -
                                                             COMMENTS WRITTEN IN TYPEDOC
const apiUrl = 'https://my-weekend-movie-app-53a46e3377d7.he
                                                              FORMAT TO GENERATE TYPEDOC
@Injectable({
                                                             DOCUMENTATION AUTOMATICALLY
  providedIn: 'root'
                                                                      (SEE NEXT IMAGE)
```

## myFlix TYPEDOC DOCUMENTATION AUTOMATICALLY GENERATED

#### my-flix-angular-client

- N my-flix-angular-client
- **∨** N app-root
  - © AppComponent
- ▼ N favorite-movie-add
  - AddFavoriteDetailsCompo
- ▼ N favorite-movie-remove
  - RemoveFavoriteDetailsCor
- ▼ N fetch-api-service
  - FetchApiDataService
- ▼ N get-all-movies
  - MovieCardComponent
- - © DirectorDetailsComponent
- - GenreDetailsComponent
- - © SynopsisDetailsComponen

## Module get-information-on-director

> Settings

#### Remarks

This component allows to display information about the director of each movie in a dialog prompt (when clicked by users). To do so, it takes the information about the director of X movie object, and renders it in the html.

#### Example

```
In the TypeScript file, this is the data extracted from a movie object and
required for this component to work:

data: {
   Name: string,
   Bio: string,
   Death: string
}

These are then accessed within the html (e.g: {{ data.Name }} to display
director's name).
```

#### Param

# README SAMPLE

FULL VERSION ON GITHUB

## myFlix web app documentation (frontend - Angular) @

#### Content

- Projet description
- User interface
- Technical aspects (overview)
- Technical aspect (development)
- App dependencies

### Projet description @

myFlix web app has been created to serve as a reference in the domain of visual entertainment. Users can create an account and then log into myFlix to have access to information about different movies. They can search for movies and create lists of favorites. myFlix has been built in two parts: the frontend (here) and the backend (see this repository for the backend part of myFlix).

The objective of this part of the project (frontend) was to develop an easy-to-use and responsive web app using Angular for the best user-experience whenever they are accessing *myFlix* to read details about different movies.

myFlix frontend development can be breakdown in the five following points:

• Who — The users of myFlix web app, so movie enthusiasts who enjoy reading information about different

# CHALLENGES OR SPECIAL POINTS OF CONSIDERATION

Finding the right balance between giving the right level of information, while remaining as synthetic as possible.

## **DECISIONS** MADE

I wrote the README documentation from A to Z, in terms of content, presentation and structure.