

LABAP Project - MyPics

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1 Initial idea

Interactive dashboard to look for images uploaded by other users.

1.1 System objectives

- Show the dashboard with most popular images and images uploaded by followed users
- Manage user authentication
- Show a page related to users' profiles containing all the images uploaded by them
- Allow users to upload, search and see images
- Allow users to follow other users to easily access their user profile and images

1.2 Distributed Software Application with Containerization

- **Front-end layer:**
 - Login/registration page
 - Homepage
 - User profile page
 - User settings page
 - Image visualization page with description and comments
 - Image upload page
- **API layer:** RESTful Web Server acting as a gateway secured with authentication
- **Logic layer:**
 - Communication with the API gateway is done through RPC
 - Microservice for user management: handles registration/authentication/access to the user profile
 - Microservice for notifications: allows the user to be notified about new likes or new comments on his images
 - Microservice for images management: handles the upload/visualization/modification/deletion/saving of images
 - Microservice for social part: allows the user to like/comment an image and follow another user
 - Microservice for images search: handles the search of an image
- **Persistence layer:** PostgreSQL database

Each element of this list represents a different Docker container of the system and all the containers are orchestrated using Docker Compose.

1.3 Potential Users

- People interested in discovering images from people that they follow
- People interested in uploading and sharing images

1.4 Use Cases

- User can register to the app
- User can login into the app
- User can search for an image
- User can visualize the home page containing most popular images and the images published by followed users
- User can upload an image
- User can save an image
- User can edit an uploaded image
- User can remove an uploaded image
- User can like/dislike an image
- User can comment an image
- User can get notified if another user likes/dislikes one of its images
- User can get notified if another user leave a comment on one of its images
- User can follow/unfollow another user
- User can access its own profile to visualize his images and the ones that he saved from other users
- User can access its own profile to manage it
- User can access another user profile to view his details and his published images
- User can logout
- User can delete its account

2 User stories and prototypes

2.1 Sign-up

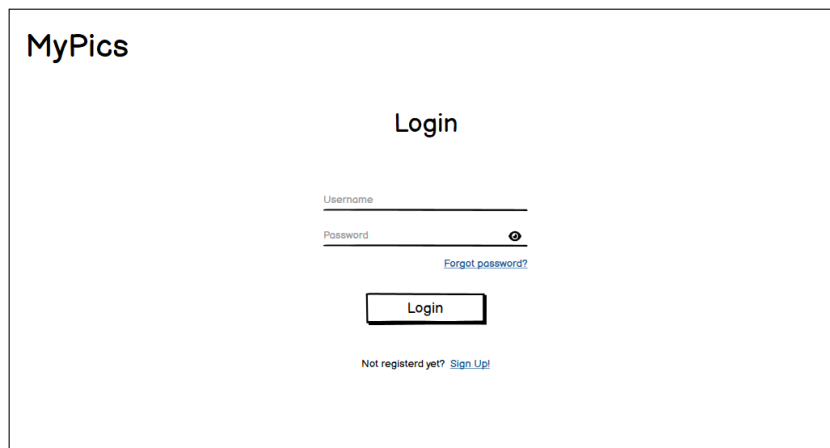
AS A	I WANT TO	SO THAT I CAN	ADDED BY
Guest	Register to the system	Create my profile	Everyone



The image shows a web form titled "MyPics" with a "Sign Up" heading. Below the heading are three input fields: "Username", "Email", and "Password". The "Password" field has a small eye icon to its right. Below the input fields is a "Sign Up" button.

2.2 Login

AS A	I WANT TO	SO THAT I CAN	ADDED BY
Non-logged registered user	Login into the system	Use system's services	Everyone



The image shows a web form titled "MyPics" with a "Login" heading. Below the heading are two input fields: "Username" and "Password". The "Password" field has a small eye icon to its right. Below the input fields is a "Login" button. Below the "Login" button is a link that says "Forgot password?". At the bottom of the form, there is a link that says "Not registered yet? Sign Up!".

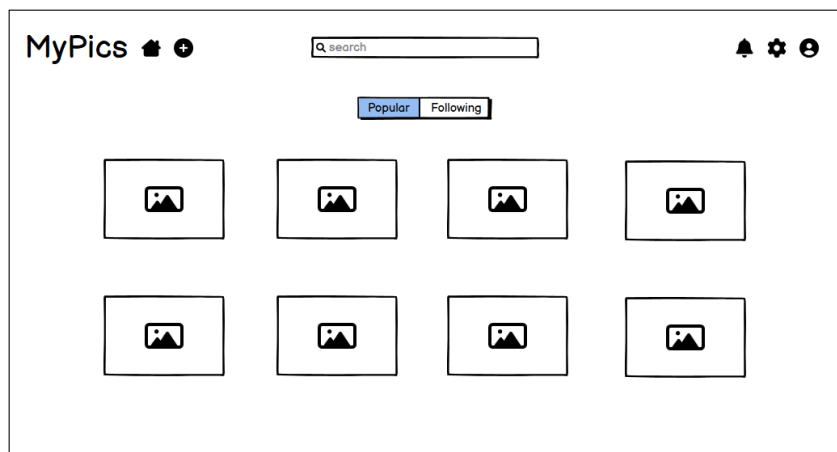
2.3 Logout

AS A	I WANT TO	SO THAT I CAN	ADDED BY
Logged registered user	Logout from the system		Everyone



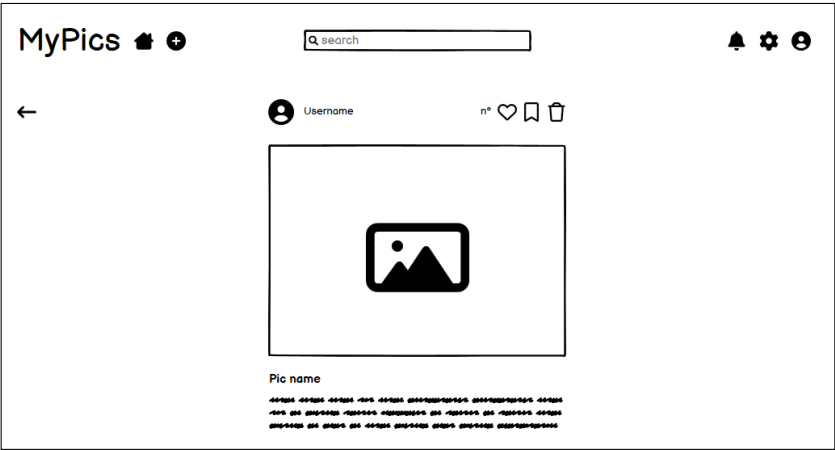
2.4 Main

AS A	I WANT TO	SO THAT I CAN	ADDED BY
Registered user	Access the homepage	Discover the most popular images	Everyone
Registered user	Search for images	Visualize them	Everyone
Registered user	Search for other users	Visualize their profile and their images	Everyone
Registered user	Get notified	Know if another user liked one of my image	Everyone
Registered user	Access my profile page	Manage it	Everyone
Registered user	Access other user's profile page	Visualize his details and published images	Everyone



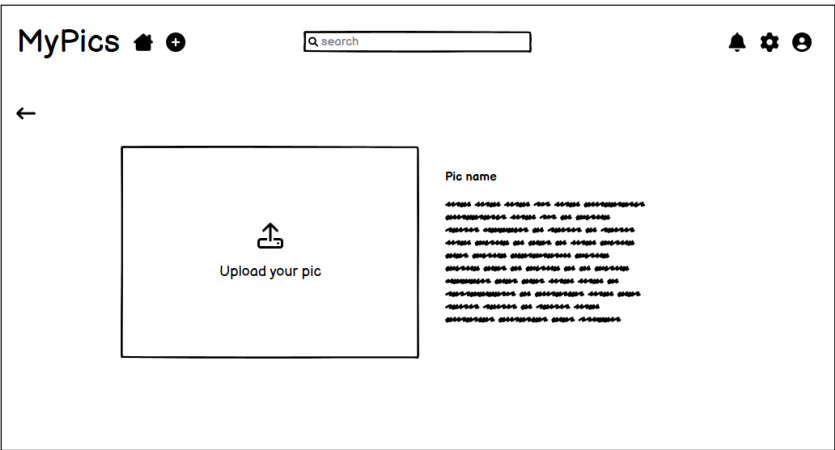
2.5 Pic

AS A	I WANT TO	SO THAT I CAN	ADDED BY
Registered user	Like an image	Express my appreciation about it	Everyone
Registered user	Save an image	Discover the most popular images	Everyone
Registered user	Remove an uploaded image	Deny to other users to visualize it	Everyone

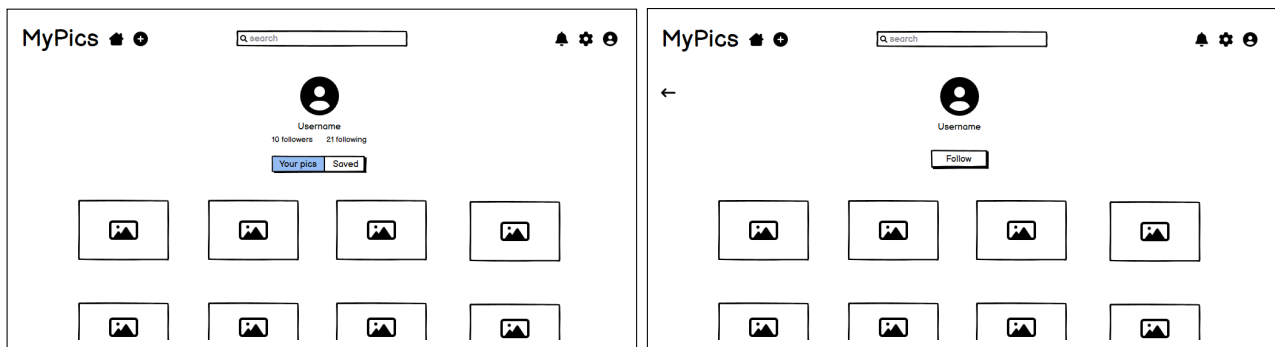


2.6 Upload pic

AS A	I WANT TO	SO THAT I CAN	ADDED BY
Registered user	Upload an image	Share it with other users	Everyone



2.7 User profile



3 Effort estimation

4 System architecture

5 Sprint analytics