

## ER: Requirements Specification Component

---

### A1: Project Name

---

The **UniLinks** is a project developed by a startup (stakeholders) as a product targeted at college students as a way of helping them integrate easier.

The main goal of the project is the development of a web-based social network for enabling students to interact with each other in an academic context. This is a tool that can be used by students and other members of the academic environment. A team of administrators is defined, which will be responsible for managing complaints and reports, being able to delete/block accounts if needed.

Un-autheticated users are able to use the social network with some limitations, being able to, like an authenticated user, see specific posts and utilize the search functionality. Users that have an account are able to have the account verified (through a whitelist of emails associated with universities) as students, associating them with their university/faculty, although this is not mandatory, verification allows users to identify people from their university, they can also edit their profile and manage their account (deleting it even). Groups can be created and managed by the authenticated users with in-group administators being able to enforce their own rules. The users will also be able to add/remove friends and create posts (being able to delete them after too), those posts will appear to their friends through their timeline which can be customized by their owner, furthermore who ever sees a post can comment it and react to it. An essential part of the social network is privacy and thus users can make their profile public or private, being shown only to their friends.

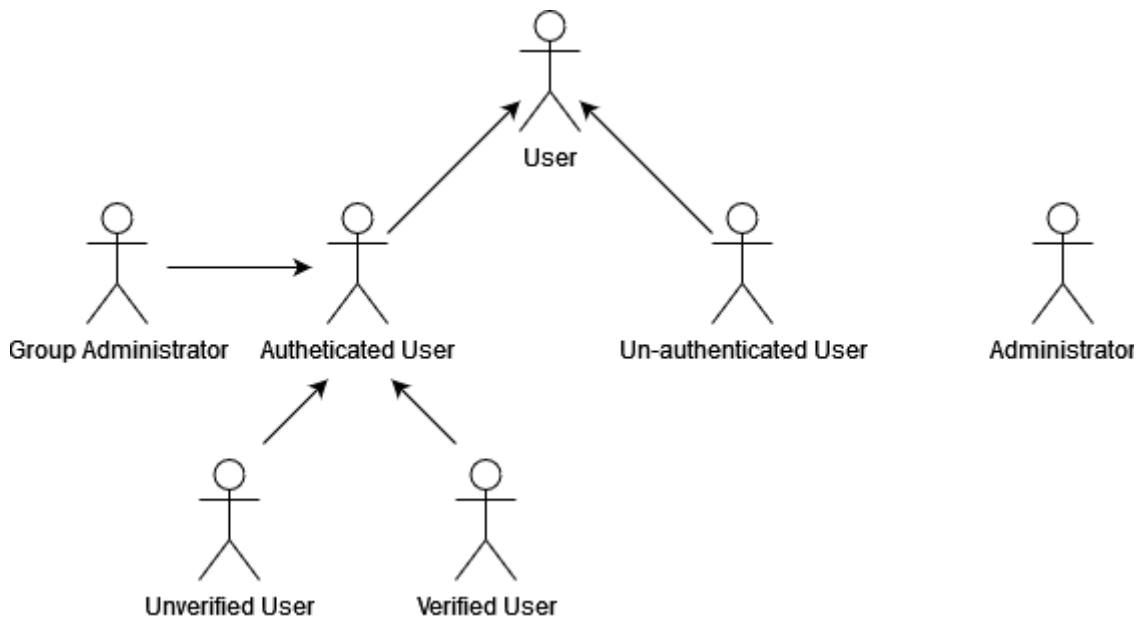
The social network will have an adaptive design so that users can access it through their computer, phone or tablet and have no problems associated with it. The user interface will also be simple and as easier to navigate as possible so that the user can go straight to the point.

### A2: Actors and User stories

---

This artifact contains the specification of the actors and their user stories, serving as agile documentation of the project's requirements.

#### 1. Actors



**Figure 1: Actors.**

Identifier	Description
User	Generic user that has access to public information, such as public profiles and groups.
Un-authenticated User	Un-authenticated user that can register itself (sign-up) or sign-in in the social network.
Autheticated User	User that has access to public information aswell as its own and its friends, can create and delete its own posts, create, leave and interact with groups, react and comment posts (aswell as delete its own comments), manage friends and manage friend requests.
Group Administrator	User that can manage a group, deleting posts and comments, inviting other users and accepting group access requests.
Verified User	User that has its account verified and therefore will be easier to identify as a student.
Unverified User	User that does not have its account verified, cannot be identified as a student.
Administrator	Can manage posts, delete/block users and receive reports and complaints.

**Table 1: Actors description.**

## 2. User Stories

For the **UniLinks** social network, consider the user stories that are presented in the following sections.

## 2.1. Un-authenticated User

Identifier	Name	Priority	Description
US001	Log-In	High	As an <i>Un-authenticated User</i> I want to be able to authenticate into the social network so that I can have access to privileged information.
US002	Sign-Up	High	As an <i>Un-authenticated User</i> I want to be able to register myself into the social network so that I can authenticate and have access to privileged information.
US003	Recover Password	Medium	As an <i>Un-authenticated User</i> I want to be able to recover my password.

**Table 2: *Un-authenticated User* user stories.**

## 2.2. User

Identifier	Name	Priority	Description
US101	Search	High	As a <i>User</i> , I want to be able to search through the social network's keywords (posts, comments, users, etc... using exact match, full-text search, multiple attributes and filters and ordering the results) so that I can find public posts.
US102	View Profile	High	As a <i>User</i> , I want to be able to see a public profile.
US103	See Main Features	Medium	As a <i>User</i> , I want to access the Home page, so that I can see a brief presentation of the website's main features.
US104	See About Us	Medium	As a <i>User</i> , I want to access the About Us page, so that I can get more information about the website and its creators.
US105	See Contacts	Medium	As a <i>User</i> , I want to access contacts, so that I can come in touch with the website creators.
US106	Contextual Error Messages	Medium	As an <i>User</i> I want to be able to see error messages so that I know what happened or what I did wrong.
US107	Contextual Help	Medium	As an <i>User</i> I want to be able to ask for help.

Identifier	Name	Priority	Description
US108	See Specific Post	Low	As an <i>User</i> I want to be able to see a specific public post.

**Table 3: *User* user stories.**

### 2.3. Authenticated User

Identifier	Name	Priority	Description
US201	See Timeline	High	As an <i>Authenticated User</i> I want to be able to see my timeline, consisting of posts from my friends and the groups I belong to, aswell as deciding its order.
US202	Create a Post	High	As an <i>Authenticated User</i> I want to be able to create a post.
US203	Edit a Post	High	As an <i>Authenticated User</i> I want to be able to edit my own post.
US204	Delete a Post	High	As an <i>Authenticated User</i> I want to be able to delete my own post.
US205	Log Out	High	As an <i>Authenticated User</i> I want to be able to log out.
US206	Edit Profile	High	As an <i>Authenticated User</i> I want to be able to edit my profile.
US207	View Private Profile	High	As an <i>Authenticated User</i> , I want to be able to see a private profile if that user is my friend.
US208	Send Friend Requests	Medium	As an <i>Authenticated User</i> I want to be able to send friend requests in order to add a friend to my friends list.
US209	Remove Friends	Medium	As an <i>Authenticated User</i> I want to be able to remove friends from my friends list.
US210	Accept Friend Requests	Medium	As an <i>Authenticated User</i> I want to be able to accept a friend request.
US211	Decline Friend Requests	Medium	As an <i>Authenticated User</i> I want to be able to decline a friend request.
US212	Comment on a Post	Medium	As an <i>Authenticated User</i> I want to be able to comment on a post.

Identifier	Name	Priority	Description
US213	Edit a Comment on a Post	Medium	As an <i>Authenticated User</i> I want to be able to edit my own comment on a post.
US214	Delete a Comment on a Post	Medium	As an <i>Authenticated User</i> I want to be able to delete my own comment on a post.
US215	Create a Group	Medium	As an <i>Authenticated User</i> I want to be able to create my own group.
US216	Invite to a Group	Medium	As an <i>Authenticated User</i> I want to be able to invite friends to a group, if given permission by an administrator.
US217	Accept a Group Invite	Medium	As an <i>Authenticated User</i> I want to be able to accept a group invite.
US218	Create a Post on a Group	Medium	As an <i>Authenticated User</i> I want to be able to create a post on a group, if given permission by an administrator.
US219	Leave a Group	Medium	As an <i>Authenticated User</i> I want to be able to leave a group I belong.
US220	React to a Post	Medium	As an <i>Authenticated User</i> I want to be able to react to a post.
US221	React to a Comment	Medium	As an <i>Authenticated User</i> I want to be able to react to a comment.
US222	Check Personal Notifications	Medium	As an <i>Authenticated User</i> I want to be able check my notifications.
US223	Delete My Account	Medium	As an <i>Authenticated User</i> I want to be able to delete my account.
US224	Add Profile Picture	Medium	As an <i>Authenticated User</i> I want to be able to add my profile picture.
US225	View Group's Members	Medium	As an <i>Authenticated User</i> I want to be able to see a group's members if I'm allowed to.

Identifier	Name	Priority	Description
US226	Receive Likes on a Post Notifications	Medium	As an <i>Authenticated User</i> I want to be able to receive a notification when a post of mine receives a like so that I can be aware of it happening.
US227	Receive Friend Request Notifications	Medium	As an <i>Authenticated User</i> I want to be able to receive a notification when I receive a friend request so that I can be aware of it happening.
US228	Change Profile Visibility	Medium	As a <i>Authenticated User</i> , I want to be able to change my profile's visibility.
US229	Appeal for Unblock	Low	As an <i>Authenticated User</i> I want to be able to appeal for unblock so that I can have access to my account's full functionalities.
US230	View Friends Feed	Low	As an <i>Authenticated User</i> I want to be able to see my friend's feed.
US231	Tag Friend in a Post	Low	As an <i>Authenticated User</i> I want to be able to tag a friend on my own post.
US232	Manage a Post's Visibility	Low	As an <i>Authenticated User</i> I want to be able to manage my own post's visibility.
US233	Tag a Friend on a Comment	Low	As an <i>Authenticated User</i> I want to be able tag a friend on a comment.
US234	Request to Join a Public Group	Low	As an <i>Authenticated User</i> I want to be able to request to join a public group.
US235	Receive Suggestions	Low	As an <i>Authenticated User</i> I want to be able to be suggested other users and groups to help me integrate better.
US236	View Other Users' Friends	Low	As an <i>Authenticated User</i> I want to be able to see who a user with a public profile is friends with so that I can find my friends that I'm not friends on the social media through my social media friends.

Identifier	Name	Priority	Description
US237	See University Related Ads	Low	As an <i>Authenticated User</i> I want to be able to see an ad related to my university so that I can join extracurricular activities, for example, an ad of when NIAEFEUP is recruiting or an ad of a Hackathon happening in my university.

**Table 4: *Authenticated User* user stories.**

### 2.3. Group Administrator

Identifier	Name	Priority	Description
US301	Edit Group Information	Medium	As a <i>Group Administrator</i> , I want to be able to edit the group's information.
US302	Remove Member	Medium	As a <i>Group Administrator</i> , I want to be able to remove a member from the group.
US303	Add to Group	Medium	As a <i>Group Administrator</i> , I want to be able to add an user to a group.
US304	Manage Member Permissions	Low	As a <i>Group Administrator</i> , I want to be able to manage who can post, invite, etc...
US305	Remove Post from Group	Low	As a <i>Group Administrator</i> , I want to be able to remove a post from the group.
US306	Change Group Visibility	Low	As a <i>Group Administrator</i> , I want to be able to change the group visibility.
US307	Manage Join Requests	Low	As a <i>Group Administrator</i> , I want to be able to manage the group join requests (accept/decline).
US308	Add Group Administrators	Low	As a <i>Group Administrator</i> , I want to be able to make a member a group administrator.

**Table 5: *Group Administrator* user stories.**

### 2.3. Administrator

Identifier	Name	Priority	Description
US401	Find User Account	High	As a <i>Administrator</i> , I want to be able to find an user's account.

Identifier	Name	Priority	Description
US402	View User Account	High	As a <i>Administrator</i> , I want to be able to view an user's account.
US403	Edit User Account	High	As a <i>Administrator</i> , I want to be able to edit an user's account.
US404	Create User Account	High	As a <i>Administrator</i> , I want to be able to create an user account.
US405	Block and Unblock User Accounts	Medium	As a <i>Administrator</i> , I want to be able to block and unblock an user account.
US406	Delete User Account	Medium	As a <i>Administrator</i> , I want to be able to delete an user account.

**Table 6: *Administrator* user stories.**

### 3. Supplementary Requirements

This section contains business rules, technical requirements and other non-functional requirements on the project.

#### 3.1. Business rules

A business rule defines or constrains one aspect of the business, with the intention of asserting business structure or influencing business behaviour. Business rules often supplement usage or user interface requirements.

Identifier	Name	Description
BR001	Upon Account Deletion	Upon account deletion, shared user data (e.g. comments, reactions) is kept but made anonymous.
BR002	Upon Group Creation	Upon group creation, the group's creator is made it's first group administrator.
BR003	Users's Self Interaction	A user can react, promote and comment under their own post.
BR004	Chronological Order	An authenticated user's post date must be more recent than the account's creation date.
BR005	Content Moderation	NSFW, extremist or hateful content will be deleted with the possibility of the author's account being terminated.



**Table 7: UniLinks business rules.****3.2. Technical requirements**

Identifier	Name	Description
TR001	Availability	The system must be available 99 percent of the time in each 24-hour period.
TR002	Accessibilty	The system must be accessible to anyone that wants to use it, regardless of having any handicap or having a different browser.
TR003	Usabilty	<b>The system must be simple to use, with a simple, not too overcrowded interface, so that any user can use it without needing to learn how to and without being confused by the visual elements present.</b>
TR004	Performance	The system must have a response time lower than 2 seconds to ensure the user's attention.
TR005	Web Application	The system should be implemented as a web application with dynamic pages (HTML5, JavaScript, CSS3 and PHP). Assuring that the system is accessible without the need to install specific applications or software, adopting standard web technologies leads to a ready to use social network, accessible to anyone, anywhere.
TR006	Portability	The server-side system should work across multiple platforms (Linux, Mac OS, etc...).The system is designed to be used by students at anytime, therefore, it must be available quickly at multiple platforms (platform-independent).
TR007	Database	The system must have The PostgreSQL database management system must be used, with a version of 11 or higher.
TR008	Security	The system shall protect the users sensitive information from unauthorized access through the use of an authentication and verification system.
TR009	Robustness	The system must be prepared to handle runtime errors in order to continue operating.
TR010	Scalability	The system must be prepared for the growth in numbers of users and their actions

Identifier	Name	Description
TR011	Ethics	The system must respect the ethical principles in software development (for example, personal user details, or data usage, should not be collected nor shared without full acknowledgement and authorization from its owner)

**Table 8: UniLinks technical requirements.**

### 3.3. Restrictions

Identifier	Name	Description
C001	Deadline	The system should be ready to use by Christmas.

**Table 9: UniLinks project restrictions.**

---

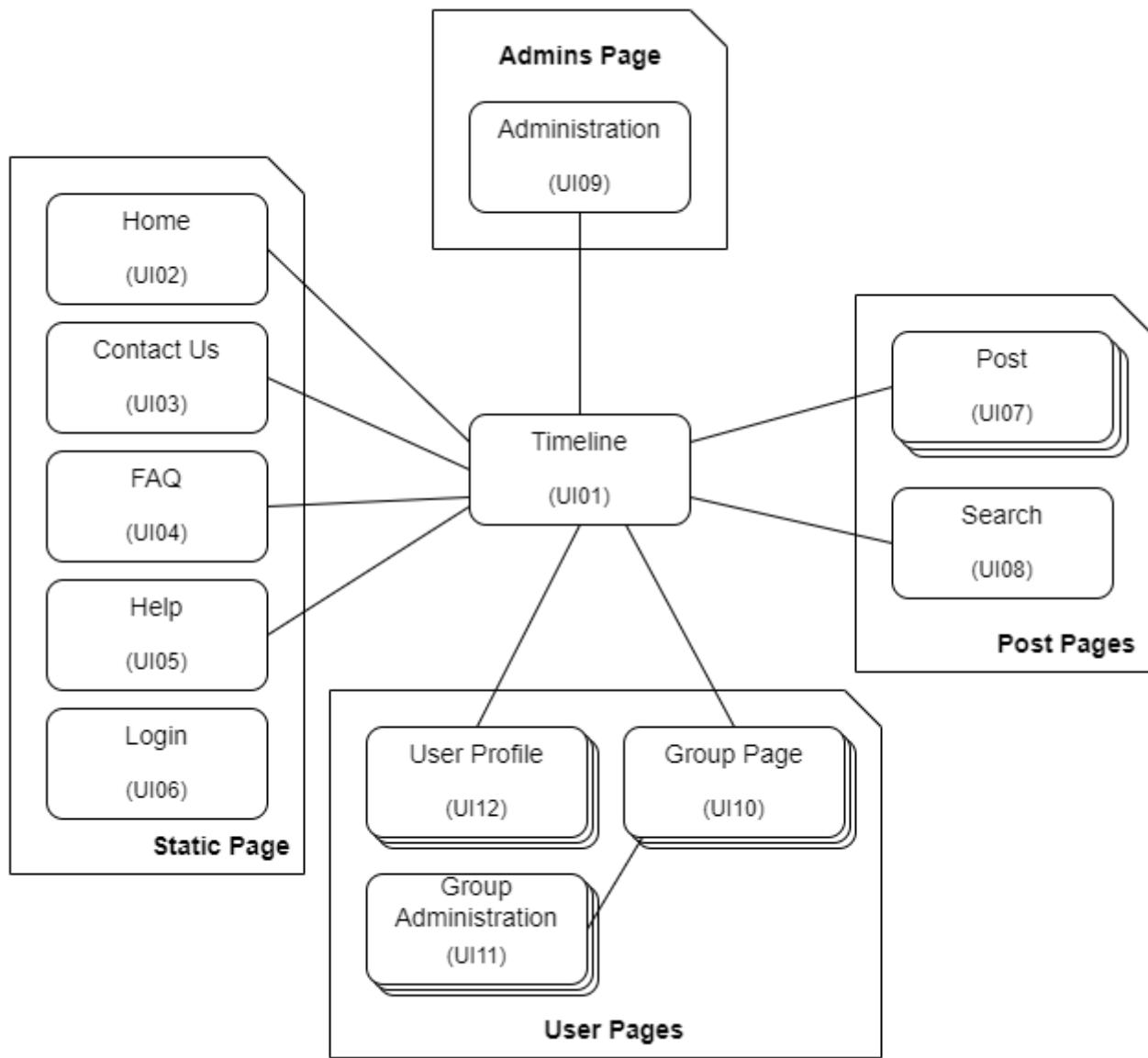
## A3: Information Architecture

---

This artifact presents a brief overview of the information architecture of the system to be developed.

### 1. Sitemap

The **UniLinks** social media is organized in four main areas, the static pages that provide general information about the system and the login page(Static Pages), the pages focused on posts and the search for them (Post Pages), the pages editable by the user (User Pages), and the pages with administration features (Admin Pages).



**Figure 2: UniLinks sitemap.**

## 2. Wireframes

For the **UniLinks** social media, the wireframes for the timeline page (UI12) and the user profile page (UI12) are presented in Figures 3 and 4, respectively.

### UI01: Timeline

- 1 Create post feature with filter to show only to who the user wants.
- 2 The search feature available at anytime in the header.
- 3 Interactables that might interest the user and that help him navigate, with a darker color the page selected.
- 4 Static Pages and the log out feature, available at anytime in the header.
- 5 Suggestions, to help the user integrate.
- 6 Reaction feature as a voting system.
- 7 Comment on a post feature.
- 8 Text with icon to help the user understand identify the action represented.
- 9 Timeline filter feature to help the user choose what it wants to see.

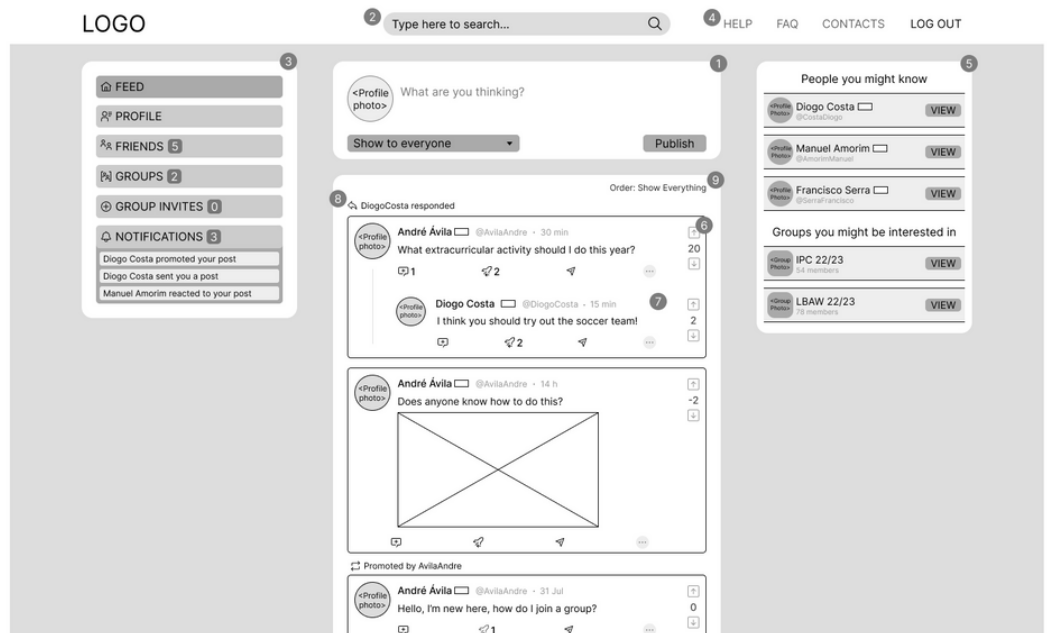


Figure 3: Timeline (UI01) wireframe.

## UI12: User Profile

- 1 University Badge if the User has been verified as a student.
- 2 The search feature available at anytime in the header.
- 3 Interactables that might interest the user and that help him navigate, with a darker color the page selected.
- 4 Static Pages and the log out feature, available at anytime in the header.
- 5 Suggestions, to help the user integrate.
- 6 Reaction feature as a voting system.
- 7 Text with icon to help the user understand identify the action represented.

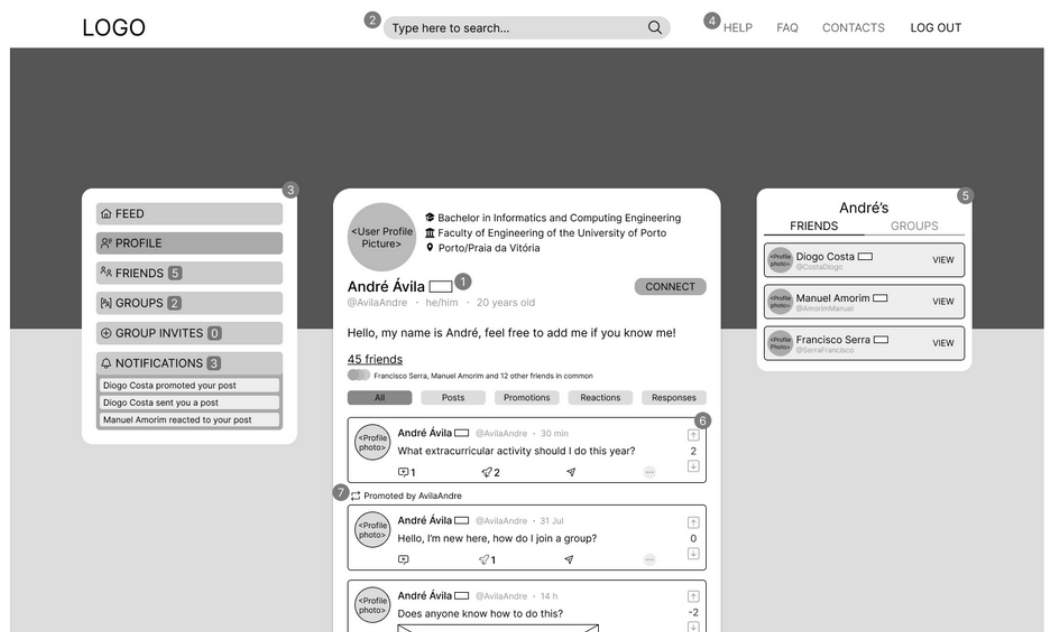


Figure 4: User Profile (UI12) wireframe.

## Revision history

Changes made to the first submission:

1. Item 1

2. ...

GROUP2222, 03/10/2022

- André Ismael Ferraz Ávila, [up202006767@edu.fe.up.pt](mailto:up202006767@edu.fe.up.pt) (Editor)
- Francisco Maria Lopes Pinto Pimentel Serra, [up202007723@edu.fe.up.pt](mailto:up202007723@edu.fe.up.pt)
- Diogo Miguel Ferreira da Costa, [up202007770@edu.fe.up.pt](mailto:up202007770@edu.fe.up.pt)
- Manuel João Gomes Alves Amorim, [up202007485@edu.fe.up.pt](mailto:up202007485@edu.fe.up.pt)