ER: Requirements Specification Component

With the development of toEaseManage we intend to create a useful and acessible platform that helps users to organize projects as well as grow as web developers throughout the curricular unit.

A1: toEaseManage

The main goal of toEaseManage is to create a web application to help with project development management. This is a tool that can be used by work teams in every project areas, by allowing the creation of a project, assigning teams and tasks and enabling discussion in a forum.

A project is formed by a project coordinator and a group of project members. The coordinator is responsible for inviting members to his project as well as assigning a new coordinator. Every team member is able to create, assign and complete tasks, as well as, to usufruit of the project discussion forum.

Users are only able to see the projects which they are allocated to. On the other hand, the team of administrators can browse and view details of every project, however they can not create or participate in them.

This plataform will allow multiple project work, since you can work simultaneously in different projects and be either member ou project coordinator in different ones. Each project will have a variety of tasks with its main goal, description, due-to date, comments and members assigned to it, that can check the task when done. Futhermore, each project will also have a specific discussion forum to discuss project ideas.

To be a toEaseManage user you can authenticate yourself in the login page linked from the Home page. The Home page has all information about the platform and website: our services, contacts to reach when there is a problema and information about toEaseManage. This is the only information available for users not authenticated. Only after being authenticated you can browse inside your profile and project.

toEaseManage will provide easy navigation and a great user experience to boost your projects results.

A2: Actors and User stories

This artefact specifies the content of the actors and user stories of the project: toEaseManage.

1. Actors

The actors for toEaseManage are presented below (Image 1) and described in Table 1.
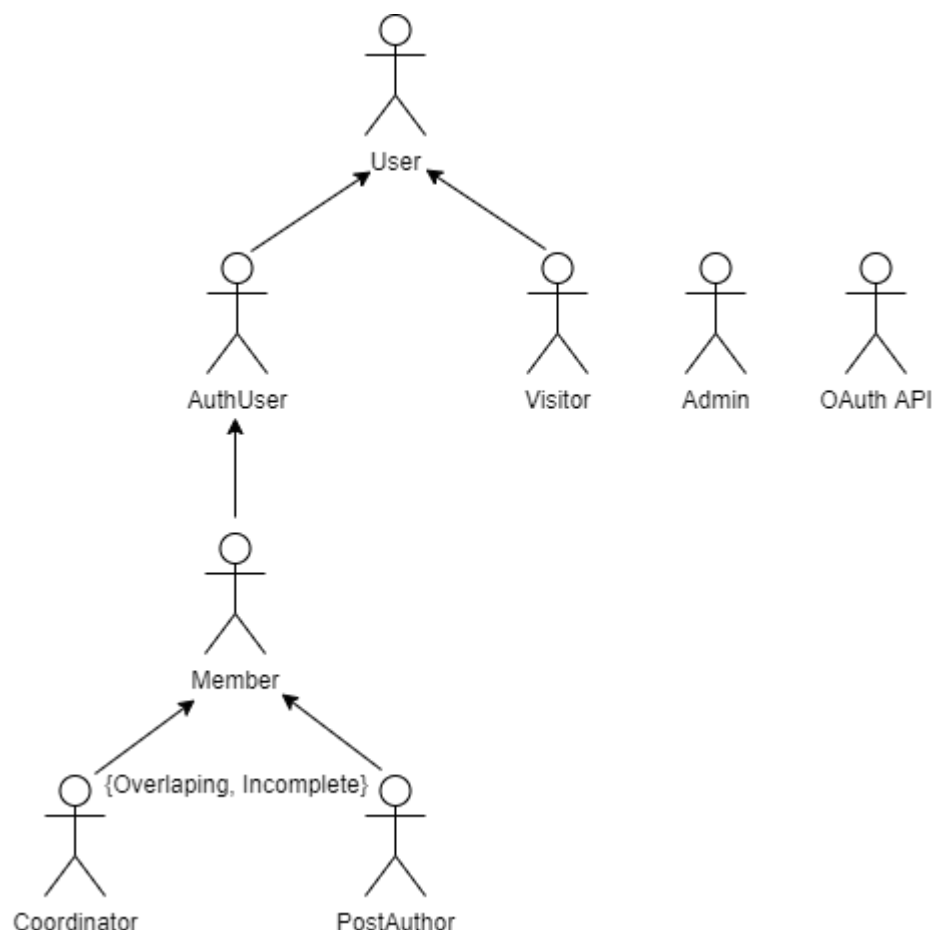
Image 1: toEaseManage Actors

Identifier	Description
User	Generic user that has access to public information
Visitor	Unauthenticated user that can register itself (sign-up) or sign-in in the system
AuthUser	Authenticated user that can manage project invitation, create new projects as well as view them
Member	Authenticated user that is assigned to projects. Has access to all the project information, can manage tasks inside the project and is able to discuss in the forum
Coordinator	Project member responsible for the project with permissions to choose other coordinator and deal with member's permissions
PostAuthor	Project member that has already sent a message to the discussion forum and is now able to delete it or edit it
Admin	Authenticated user that is responsible for the management of the platform being able to browse projects and see their information
OAuth API	External OAuth API that can be used to register or authenticate into the system

Table 1: toEaseManage Actors description

2. User Stories

In the following tables we present the user stories for the actors described above.

2.0. User

Identifier	Name	Priority	Description
US0.1	See Home	high	As a User, I want to access the home page, so that I can see a brief presentation of the website
US0.2	See About	high	As a User, I want to access the about page, so that I can see a complete description of the website as well as its creators
US0.3	Consult Contacts	medium	As a User, I want to access contacts, so that I can come in touch with the platform creators
US0.4	Consult Services	medium	As a User, I want to access the services information, so that I can see the website's services

Table 2: User User Stories

2.1. Visitor

Identifier	Name	Priority	Description
US1.1	Sign-in	high	As a Visitor, I want to authenticate into the system, so that I can access privileged information
US1.2	Sign-up	high	As a Visitor, I want to register myself into the system, so that I can authenticate myself into the system
US1.3	OAuth API Sign-up	very low	As a Visitor, I want to register a new account linked to my Google account, so that I do not need to create a whole new account to use the platform
US1.4	OAuth API Sign-in	very low	As a Visitor, I want to sign-in through my Google account, so that I can authenticate myself into the system

Table 3: Visitor User Stories

2.2. AuthUser

Identifier	Name	Priority	Description
US2.1	Create projects	high	As a AuthUser, I want to create my own projects, so that the users can work on the project
US2.2	View projects	high	As a AuthUser, I want to view the projects that are allocated to me, so that I can work on them

Identifier	Name	Priority	Description
US2.3	Project Invitation	low	As a AuthUser, I want to manage my project invitations, so that I can accept or refuse the invites
US2.4	Mark project as favorite	high	As a AuthUser, I want to mark the projects as favorite, so that I can easily find the projects that interests me the most
US2.5	Logout	high	As a AuthUser, I want to log out of my account, so that I can leave the website safely
US2.6	Delete account	high	As a AuthUser, I want to be able to delete my account, so that I can remove my information from the website
US2.7	View profile	high	As a AuthUser, I want to view my profile information, so that I can check it
US2.8	Edit profile	high	As a AuthUser, I want to edit my profile information, so that I can update it
US2.9	Upload Profile Pictures	high	As a AuthUser, I want to upload a profile picture for me account, so that users can identify me
US2.10	View notifications	high	As a AuthUser, I want to be able to see the notifications, so that informs me of some changes
US2.11	Appeal for unblock	high	As a AuthUser, I want to be able to ask for the Administrators to unblock my account, so that I can continue with my work
US2.12	Order Project	low	As a AuthUser, I want to be able to go through my project in an order of my choice (alphabetical, cronological), so that I can find it easily
US2.13	Receive Notifications	As a AuthUser, I want to receive notifications relevant to me, so that I can be aware of what is appening	
US2.14	Accept project invitations	As a AuthUser, I want to be able to accept project invitations, so that i can be part of them	

Table 4: AuthUser User Stories

2.3. Member

Identifier	Name	Priority	Description
US3.1	Create Tasks	high	As a Member, I want to create tasks, so that I can add to dos to the project
US3.2	Manage Tasks	high	As a Member, I want to manage tasks details, so that I can change task information such as due date
US3.3	Assign Tasks	high	As a Member, I want to assign tasks to members of the project, so that everyone knows what to do
US3.4	View Tasks	high	As a Member, I want to view all the tasks, so that I can see what everyone needed to do
US3.5	Comment Tasks	high	As a Member, I want to comment on tasks, so that I can complete it with additional information
US3.6	Complete Tasks	high	As a Member, I want to be able to check the tasks I have done, so that everyone knows it is completed
US3.7	Search Tasks	high	As a Member, I want to be able to search tasks by keywords, so that I can easily find what I want
US3.8	Browse the Project Forum	medium	As a Member, I want to be able to navigate in the project forum so that I can be part of current discussions
US3.9	Post messages to Project Forum	medium	As a Member, I want to be able to publish messages, so that I can participate in any forum discussion
US3.10	Leave Project	high	As a Member, I want to be able to leave a project , so that I stop being part of the that project team
US3.11	View Project Details	high	As a Member, I want to be able to check project information, so that I can know the members of the project along with other relevant information
US3.12	View Team Profiles	high	As a Member, I want to be able to see other team members profiles , so that I can have more information about them
US3.13	View Project Timeline	medium	As a Member, I want to be able to see project tasks done, so that I can have more understanding about the development of the project

Table 5: Member User Stories

2.4. Coordinator

Identifier	Name	Priority	Description

Identifier	Name	Priority	Description
US4.1	Invite Users	low	As a Coordinator, I want to invite other persons to my project by email , so that I can have more members in my project
US4.2	Assign Coordinator	high	As a Coordinator, I want to be able to assign new coordinators to the project, so that I can have other Users helping me in the project management
US4.3	Edit Project Details	high	As a Coordinator, I want to edit current project information, so that I can update information referent to the project
US4.4	Remove Member	high	As a Coordinator, I want to be able to remove some member from the project , so that I can decide wich persons are working in the project
US4.5	Archive Project	high	As a Coordinator, I want store all data relative to the project, so that I can safely record finished projects
US4.6	Manage Members Permissions	low	As a Coordinator, I want manage project Members permissions, so that I can control what members can manage

Table 6: Coordinator User Stories

2.5. PostAuthor

Identifier	Name	Priority	Description
US5.1	Edit Post	low	As a PostAuthor, I want to edit the post that I had made , so that I can rectify what I had wrote before
US5.2	Delete Post	low	As a PostAuthor, I want to delete post that I had made , so that I can erase some mistaken post

Table 7: PostAuthor User Stories

2.6. Admin

Identifier	Name	Priority	Description
US6.1	Login Admin Account	high	As an Admin, I want to be able to login in to my account, so that I can have an administrator profile
US6.2	Administer User	high	As an Admin, I want to search through the existing users, so that I can view, edit and create them
US6.3	Block User	high	As an Admin, I want to be able to block some User account, so that I can prevent them from using the website wrongly

Identifier	Name	Priority	Description
US6.4	Unblock User	high	As an Admin, I want to unblock Users, so that I can give their permissions back
US6.5	Delete User	high	As a Admin, I want erase User accounts, so that I can remove there working history from the website
US6.6	Browse Projects	high	As an Admin, I want to be able to browse through projects, so that I can iterate through the existing projects
US6.7	View Project	high	As an Admin, I want view project details, so that I can validate the curret usage of the given features

Table 8: Admin User Stories

2.7. OAuth API

Identifier	Name	Priority	Description
US7.1	Get Information	high	As a OAuth API, I want to get information related to the User, so that all the information is updated

Table 9: OAuth API User Stories

3. Supplementary Requirements

This section contains the Business Rules, Technical Requirements and Restrictions for the system we are developing.

3.1. Business rules

A business rule defines actions the website may follow to function properly.

Identifier	Name	Description
BR01	Account deletion	Upon account deletion, all the shared social data must be kept as anonymous author
BR02	Admin accounts access	Administrator accounts are independent from the User accounts, so that they can not create neither participate in projects
BR03	Notifications target	Notifications must only be delivered to those who are related to them. If a User is not in a project he must not receive any of it notifications
BR04	Leave project with task	Upon being removed from a project, all the tasks assignments related to the member must be deleted
BR05	Task ending	When a task is closed it must be kept as finished, so that project members can know the work has already been done

Identifier	Name	Description
BR06	User Block	Upon being blocked a User is removed from all his projects ??

Table 10: toEaseManage Business Rules

3.2. Technical requirements

The technical requirements listed below are the necessary aspects the system needs to operate.

Identifier	Name	Description
TR01	Availability	The system must be available 99 percent of the time in each 24-hour period
TR02	Accessibility	The system must ensure that everyone can access the pages, regardless of whether they have any handicap or not, or the Web browser they use
TR03	Usability	The system should be simple and easy to use. The toEaseManage website is designed to help the Users manage their projects so its mandatory that every one can easily navigate through it
TR04	Performance	The system should have response times shorter than 2s to ensure the user's attention
TR05	Web application	The system should be implemented as a web application with dynamic and static pages (HTML5, JavaScript, CSS3 and PHP or Node.js). Users that use toEaseManage must not have the need to install new applications
TR06	Portability	The server-side system should work across multiple platforms (Linux, Mac OS, etc.). The toEaseManage website is destined to all kind of Users regardless of the platform that they are using
TR07	Database	The PostgreSQL database management system must be used, with a version of 11 or higher.
TR08	Security	The system shall protect information from unauthorised access through the use of an authentication and verification system
TR09	Robustness	The system must be prepared to handle and continue operating when runtime errors occur
TR010	Scalability	The system must be prepared to deal with the growth in the number of users and their actions
TR011	Ethics	The system must respect the ethical principles in software development

Table 11: toEaseManage Technical Requirements

3.3. Restrictions

A restriction limits the freedom of how the project website is developed.

Identifier	Name	Description

Identifier	Name	Description
C01	Deadline	The systems should be ready to be used at the end of the semester, to be able to be evaluated

A3: Information Architecture

toEaseManage is a project managing platform that helps users to organize their projects.

This artefact includes an overview of the user interface and some features, an overview about the Sitemap and a description of the main interactions with the web application.

1. Sitemap

The toEaseManage system is organized in six main areas, the static pages that provide general information about the system (Static Pages),the pages used to authenticate in the system (Authentication), the individual user pages that provide information related to the User (User Pages), the pages with administration features (Admin Pages), the pages used to explore and access the Project collection (Project Area) and the pages that provide information related to the tasks (Task Area).
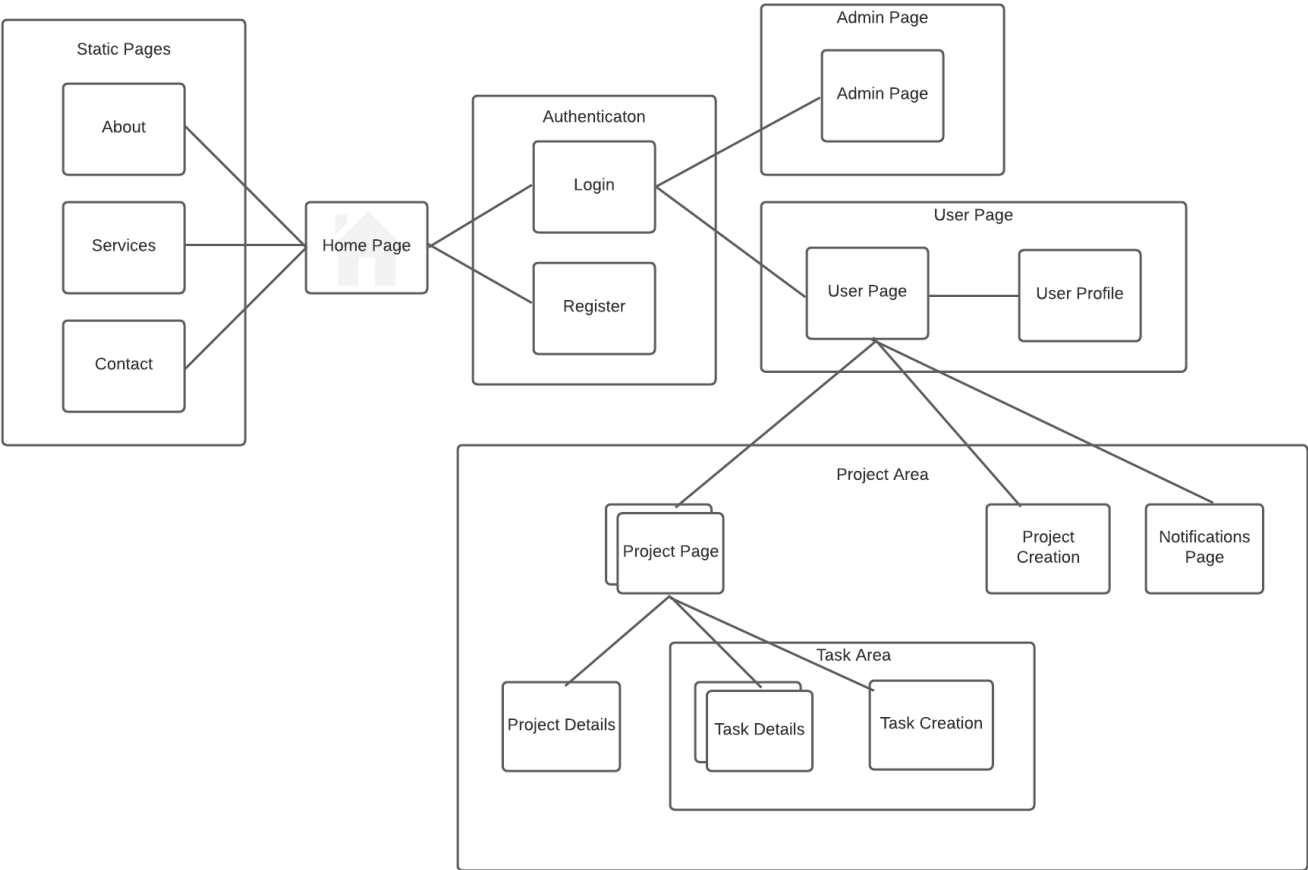

Figure 2: toEaseManage sitemap

2. Wireframes

For the toEaseManage system, the wireframes for the home page (UI1), the user page (UI2) and the project page (UI3) are presented in Figures 3, 4 and 5, respectively.

UI1: Home Page

1 - Page describing the purpose of the website
2 - Page that keeps information about our services
3 - Page with the contacts of the crew that made the website
4 - Login page to have access of restrict information inside the website
5 - Register page so that new users can have an account
6 - Some comments about the website
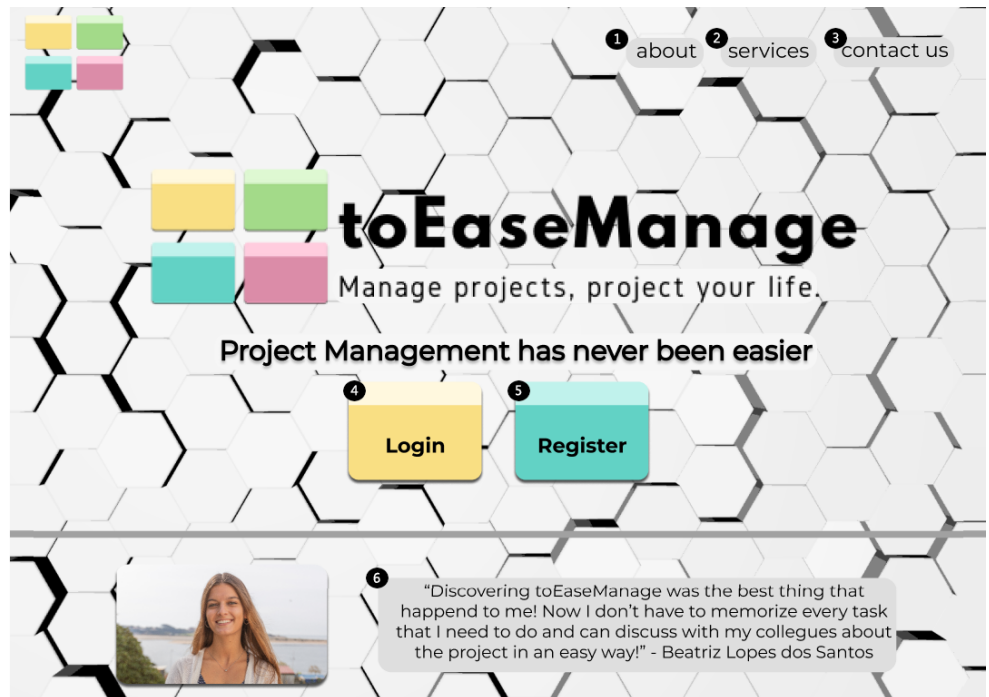
Figure 3: Home Page (UI1) wireframe

UI2: User Page

1 - Notification pop-up where invitations and notifications like "A task was complete" appear
2 - Button that leads to the profile page
3 - Filter buttons (Eg.: Selecting the favorite button will only show the favorite projects)
4 - Create a new project button
5 - If pressed will appear all the information about the project
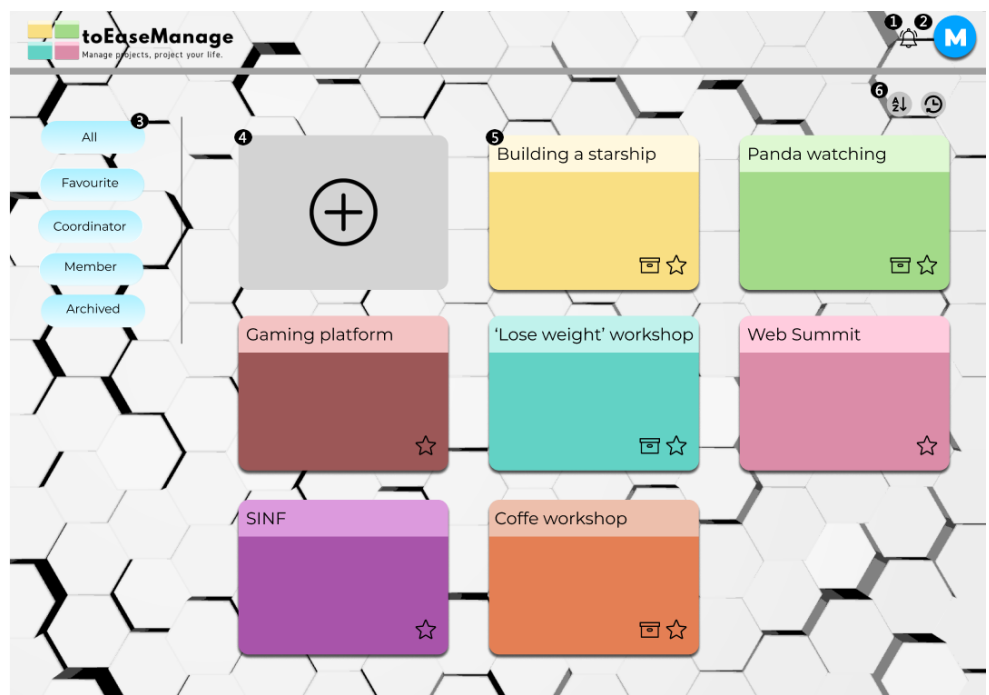6 - Ordering button, first one alphabetically, second from most recent to the oldest

Figure 4: User Page (UI2) wireframe

UI3: Project Page

1 - Button that leads to more specific project details
2 - To do tasks, by clicking on one there are more informations, such as who is assigned to it
3 - Project forum, made to exchange messages between the project crew
4 - Tasks that are done. By putting the mouse on top of it, the tasks will appear like task number one and more details can be seen by clicking on it
5 - Edit button to edit the message sent
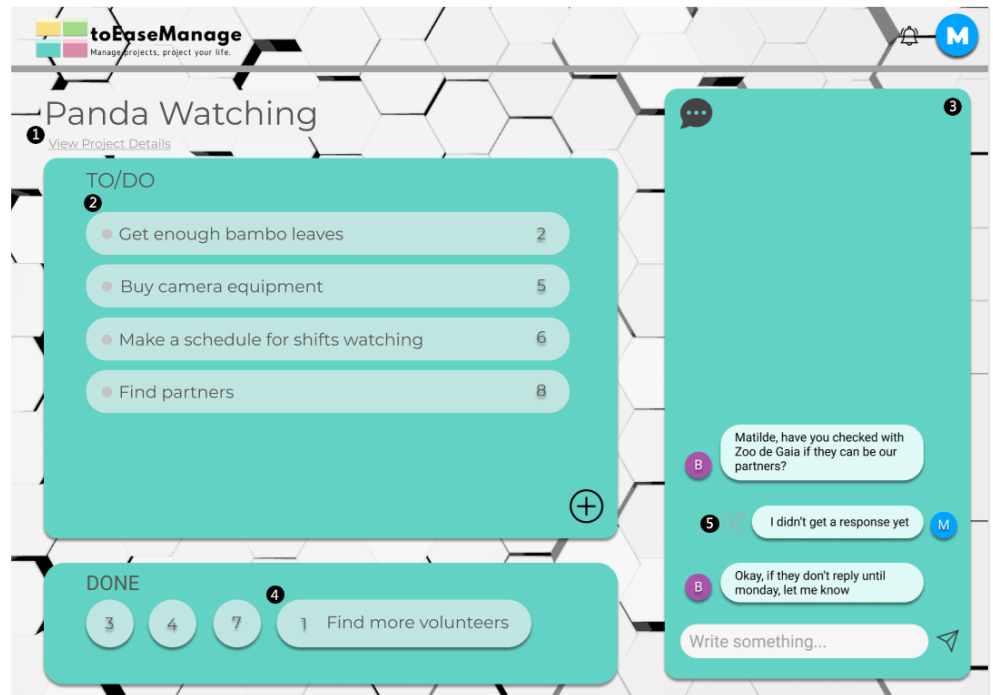
Figure 5: Project Page (UI3) wireframe

Revision history

08/11/2021 - First Version

GROUP2102, 08/11/2021

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