

er

Last edited by Joao Tomas Matos Fernandes Garcia Padrao 7 months ago

ER: Requirements Specification Component

BrainShare seeks to use the internet’s power to connect people towards developing knowledge collaboratively.

A1: BrainShare

BrainShare is an innovative web-based information system, designed for everyone who wants to exchange knowledge through collaborative questions and answers in a structured manner, through the use of tags to separate information into categories. The goal behind the project is to foster personal growth in the user by allowing them to engage in discussion on themes that are relevant to their own interests.

We are motivated by the personal growth of our users. We believe that through collaboration our users can develop their own knowledge and that of others at a rate higher than otherwise and thus we seek to develop a platform to make this possible.

This application enables users to organize and track all their questions and answers; they may be scattered across various topics, and the system will centralize them into a virtual knowledge hub accessible to all users. BrainShare provides users, through an advanced search feature, to search questions by a specific tag, to see the content that you voted on your profile and to engage with other users by answering their questions or posing your own.

The different users on the platform are separated into groups with different permissions. The admin has a high-level control with the unique role of managing the entire platform (e.g Add/Delete Tags). The moderators group has the responsibility for managing and maintaining the quality of the Authenticated Users discussions (e.g. Delete inappropriate commentary). Another group is the Authenticated User, doing the questions and answers and voting on their favorite. The last group is the guest group, which consists of users who are not registered or not logged-in, they can see the questions and answers on the platform, however, they are not able to participate.

Finally, BrainShare also features a comprehensive notifications system designed to keep users informed and engaged on the platform. Notifications play a vital role in enhancing the user experience and include various types of updates, such as new answers and comments, tag updates and moderation Alerts (for admins or moderators).

A2: Actors and User stories

This artifact comprises the delineation of the actors and their respective user stories, functioning as agile project requirement documentation.

1. Actors

The actors involved in the **BrainShare** system are represented in Figure 1 and described in Table 1.

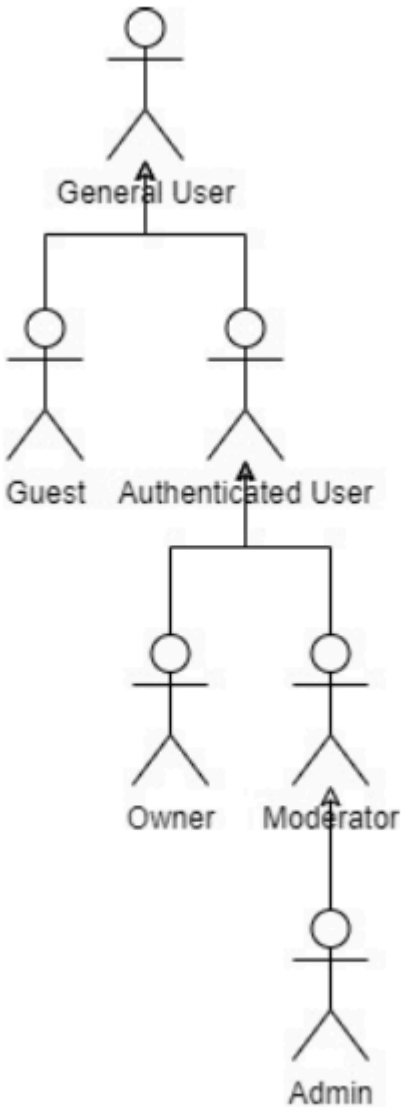


Figure 1: BrainShare actors.

Identifier	Description
Guest	Non-authenticated user who can view the website but cannot participate in debates.
Authenticated User	Represents registered and logged-in users who have various functionalities on the platform.
Owner	Represents authenticated users that are the owners of the questions/answers/comments.
Moderator	Represents authenticated users with moderation privileges, they are responsible for managing and maintaining the quality of discussions within communities.
Admin	Represents administrators with high-level control over the entire platform.

Table 1: BrainShare actors description.

2. User Stories

Regarding the **BrainShare** system, consider the user stories that are presented in the following sections.

2.1. General User

User Story	Name	Priority	Description
GU1	Login	High	As a User, I want to be able to log in to my account, so that I can access my profile and participate in discussions.
GU2	Logout	High	As a User, I want to be able to log out of my account when I'm done using the site.
GU3	User Management	Low	As a User, I want there to be user management, such as changing passwords or recovering forgotten usernames.

2.2. Guest

User Story	Name	Priority	Description
G1	Sign-Up	High	As a Guest, I want to be able to sign up for an account, so that I can become a registered user.

2.3. Owner

User Story	Name	Priority	Description
O1	Edit Question	High	As an Owner, I want to be able to edit the content of my posted question to provide additional context or make necessary revisions.
O2	Delete Question	High	As an Owner, I want the ability to delete my posted question if it is no longer relevant or necessary.
O3	Edit Answer	High	As an Owner, I need the capability to edit the content of my posted answer to improve its clarity or relevance.
O4	Delete Answer	High	As an Owner, I want the capability to delete my posted answer if it is no longer accurate or relevant.
O5	Edit comment on questions	High	As an Owner, I want the ability to edit my comments on questions to improve clarity or address any mistakes.
O6	Delete comment on questions	High	As an Owner, I want the capability to delete my comments on questions if they are no longer relevant or necessary.
O7	Edit comment on answers	High	As an Owner, I want the ability to edit my comments on answers to improve clarity or address any mistakes.

User Story	Name	Priority	Description
O8	Delete comment on answers	High	As an Owner, I want the capability to delete my comments on answers if they are no longer relevant or necessary.

2.4. Authenticated User

User Story	Name	Priority	Description
AU1	Vote On Questions	High	As an Authenticated User, I want to vote on questions, so that I can express which one I find more valuable.
AU2	Submit a question	High	As an Authenticated User, I want to submit a question to actively contribute to the community's knowledge base.
AU3	View Question Details	High	As an Authenticated User, I want to view question details to gain comprehensive information and context.
AU4	Submit an answer	High	As an Authenticated User, I want to submit an answer to share my insights and contribute to solving questions.
AU5	View User Profiles	High	As an Authenticated User, I want to view user profiles to learn more about other community members.
AU6	View My Answers	High	As an Authenticated User, I want to view my answers to keep track of my contributions.
AU7	View My Questions	High	As an Authenticated User, I want to view my questions to review and manage my posted queries.
AU8	See Top questions	Medium	As an Authenticated User, I want to see top questions to quickly access high-value content in the community.
AU9	Browse questions	High	As an Authenticated User, I want to browse questions to explore a variety of topics within the community.
AU10	Comment on questions	High	As an Authenticated User, I want to comment on questions to provide additional insights or seek clarification.
AU11	See Recent questions	Medium	As an Authenticated User, I want to see recent questions to stay updated on the latest community discussions.
AU12	Comment on answers	High	As an Authenticated User, I want to comment on answers to engage in discussions and seek further clarification.
AU13	See other user profiles	High	As an Authenticated User, I want to see other user profiles to learn more about fellow community members.
AU14	Mark answer as correct	High	As an Authenticated User, I want to mark an answer as correct to highlight the solution for a specific question.
AU15	Edit profile	High	As an Authenticated User, I want to edit my profile to keep my information up-to-date.
AU16	Recover password	High	As an Authenticated User, I want the ability to recover my password in case I forget or lose access.
AU17	Delete profile	High	As an Authenticated User, I want to delete my profile if I choose to discontinue my involvement in the community.
AU18	Appeal for unblock	High	As an Authenticated User, I want to appeal for unblock if my account has been restricted, presenting my case for reconsideration.
AU19	See About Us page	High	As an Authenticated User, I want to see the About Us page to learn more about the community's mission, values, and background.
AU20	See FAQ page	High	As an Authenticated User, I want to see the FAQ page to find answers to common questions about using the community platform.
AU21	See contact page	High	As an Authenticated User, I want to see the contact page to find relevant information for reaching out to community administrators or support.

2.5. Moderator

User Story	Name	Priority	Description
M1	Content moderation and ban	Low	As a Moderator, I want to have the ability to remove or hide inappropriate content and ban users who violate community rules.
M2	Edit tags	High	As a Moderator, I want to edit tags so that I can ensure the accuracy and relevance of information within the system.
M3	Search for a user	High	As a Moderator, I want to search for a user so that I can quickly locate specific user accounts and access relevant information.
M4	Block user	High	As a Moderator, I want to block a user so that I can restrict their access and prevent unauthorized use of the system.
M5	Unblock user	High	As a Moderator, I want to unblock a user so that I can restore their access to the system when needed.
M6	See appeals	High	As a Moderator, I want to see appeals for unblock so that I can review and assess requests from users seeking to regain access.
M7	Discussions closure	Low	As a Moderator, I want to close a discussion, so that I can easily identify unanswered questions.
M8	Pin questions	Low	As a Moderator, I want to have the ability to pin important questions and announcements to the top of the tag page to ensure visibility.
M9	Event organization	Low	As a Moderator, I want to be able to organize and host events, contests, or themed discussions within the community.
M10	Notifications	Medium	As a Moderator, I want to be notified of any user reports or flags on content within my tag, so that I can take appropriate action.

2.6. Administrator

User Story	Name	Priority	Description
Admin1	Create tags	High	As an admin, I want to create tags so that I can efficiently organize and categorize information within the system.
Admin2	Edit tags	High	As an admin, I want to edit tags so that I can ensure the accuracy and relevance of information within the system.
Admin3	Delete tags	High	As an admin, I want to delete tags so that I can maintain a streamlined system by removing unnecessary or outdated categorizations.
Admin4	Create new user	High	As an admin, I want to create new user accounts so that I can facilitate the onboarding process for individuals joining the system.
Admin5	Edit user	High	As an admin, I want to edit user information so that I can maintain accurate records and adapt to any changes in user details.
Admin6	Delete user	High	As an admin, I want to delete user accounts so that I can efficiently manage the system's user base.
Admin7	Search for a user	High	As an admin, I want to search for a user so that I can quickly locate specific user accounts and access relevant information.
Admin8	Block user	High	As an admin, I want to block a user so that I can restrict their access and prevent unauthorized use of the system.
Admin9	Unblock user	High	As an admin, I want to unblock a user so that I can restore their access to the system when needed.
Admin10	See appeals	High	As an admin, I want to see appeals for unblock so that I can review and assess requests from users seeking to regain access.

3. Supplementary Requirements

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

3.1. Business rules

Identifier	Name	Description
BR01	Deleted user	Upon account deletion (FR.014), shared user data (e.g. comments, reviews, likes) is kept but is made anonymous
BR02	Participation rights for admins	Admins are participating members of the community, i.e. can post or vote on questions or answers
BR03	Edited indication	Questions and answers edited after being posted should have a clear indication of the editions.
BR04	User badges	User badges are dependent on the likes and dislikes received on his questions and answers, and also on actions made by the user (first question, first answer, etc).
BR05	Email validation	Users must provide a valid email address to register.
BR06	Password validation	Passwords must be at least 8 characters long and include at least one uppercase letter, one lowercase, one number, and one special character.
BR07	User bans	Users are banned after being blocked more than five times.
BR08	Reported content management	Inappropriate or violating content is removed within 24 hours of being reported.
BR09	Real-Time information delivery	Dates of questions are always older than answers dates.
BR10	Self-responding	Users can answer/vote on their own questions.

Table 8: BrainShare business rules.

3.2. Technical requirements

Identifier	Name	Description
TR01	Performance	The system should have response times shorter than 2s to ensure the user's attention.
TR02	Robustness	The system must be prepared to handle and continue operating when runtime errors occur.
TR03	Scalability	The system must be prepared to deal with the growth in the number of users and their actions.
TR04	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.
TR05	Responsiveness	BrainShare is designed to be responsive and work on a wide range of screen sizes and resolutions. There are no strict minimum resolution requirements, but a higher resolution monitor will provide a better browsing experience.

Table 9: BrainShare technical requirements.

Three most critical TR

Robustness is a fundamental requirement because it ensures the system's stability and ability to continue operating in the face of errors or unexpected events. Without robustness, the system is susceptible to crashes or disruptions, which can lead to a poor user experience, data loss, and potential security vulnerabilities.

Accessibility is highly critical because it addresses inclusivity and the ability of all users, including those with disabilities, to access and use the system. Failure to meet accessibility requirements can result in legal compliance issues, discrimination, and exclusion of a significant portion of the user base. Accessibility is not just a moral imperative; it is often a legal requirement in many jurisdictions.

While performance is essential for user satisfaction, its criticality may vary depending on the nature of the system and its target audience. In some cases, response times shorter than 2 seconds may be crucial to maintain user attention, especially for real-time applications or services. However, in other contexts, slightly longer response times may be acceptable. Therefore, performance, while important, may be considered moderately critical in comparison to robustness and accessibility, which have broader and more significant implications for user experience and compliance.

3.3. Restrictions

Identifier	Name	Description
C01	Content guidelines	BrainShare has guidelines for acceptable content and prohibits illegal, harmful, or offensive materials.
C02	Copyright	BrainShare has copyright and intellectual property rules to prevent plagiarism and unauthorized use of content.

Table 10: Restrictions.

A3: Information Architecture

This artifact provides a brief overview of the information architecture of the system. We included a sitemap to illustrate in a simple way the flow of the system and a set of wireframes to provide a basic idea of the visual components on the webpages.

1. Sitemap

The **BrainShare** system is organized in five main areas, the pages with administrator tools (Admin Pages), the pages with moderator tools (Moderator Pages), the pages used to explore the questions done in the platform (Search Pages), the individual user page (User Pages) and finally the static pages that provide the main information about the platform (Static Pages).

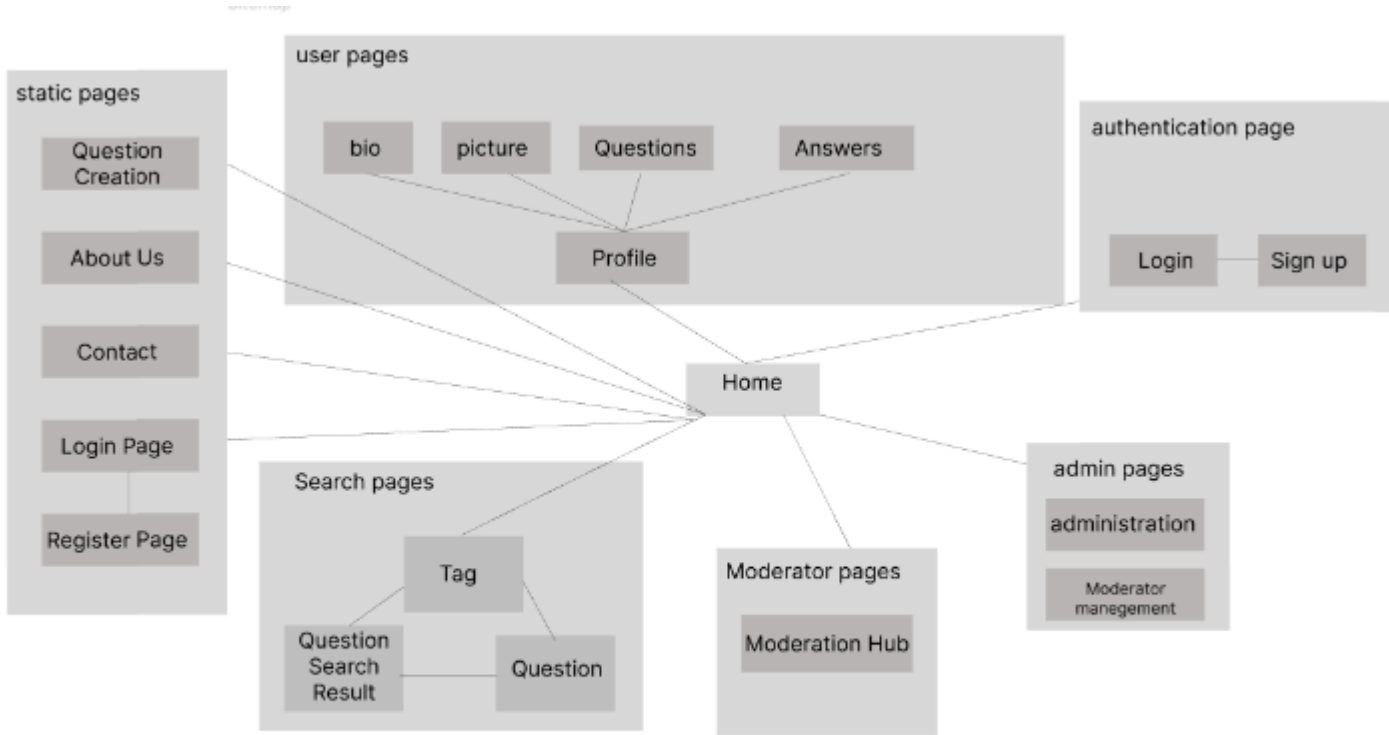


Figure 1: BrainShare sitemap.

2. Wireframes

The wireframes for the Homepage and the Question Search Results Page are presented in Figures 2 and 3, respectively.

UI01: Homepage

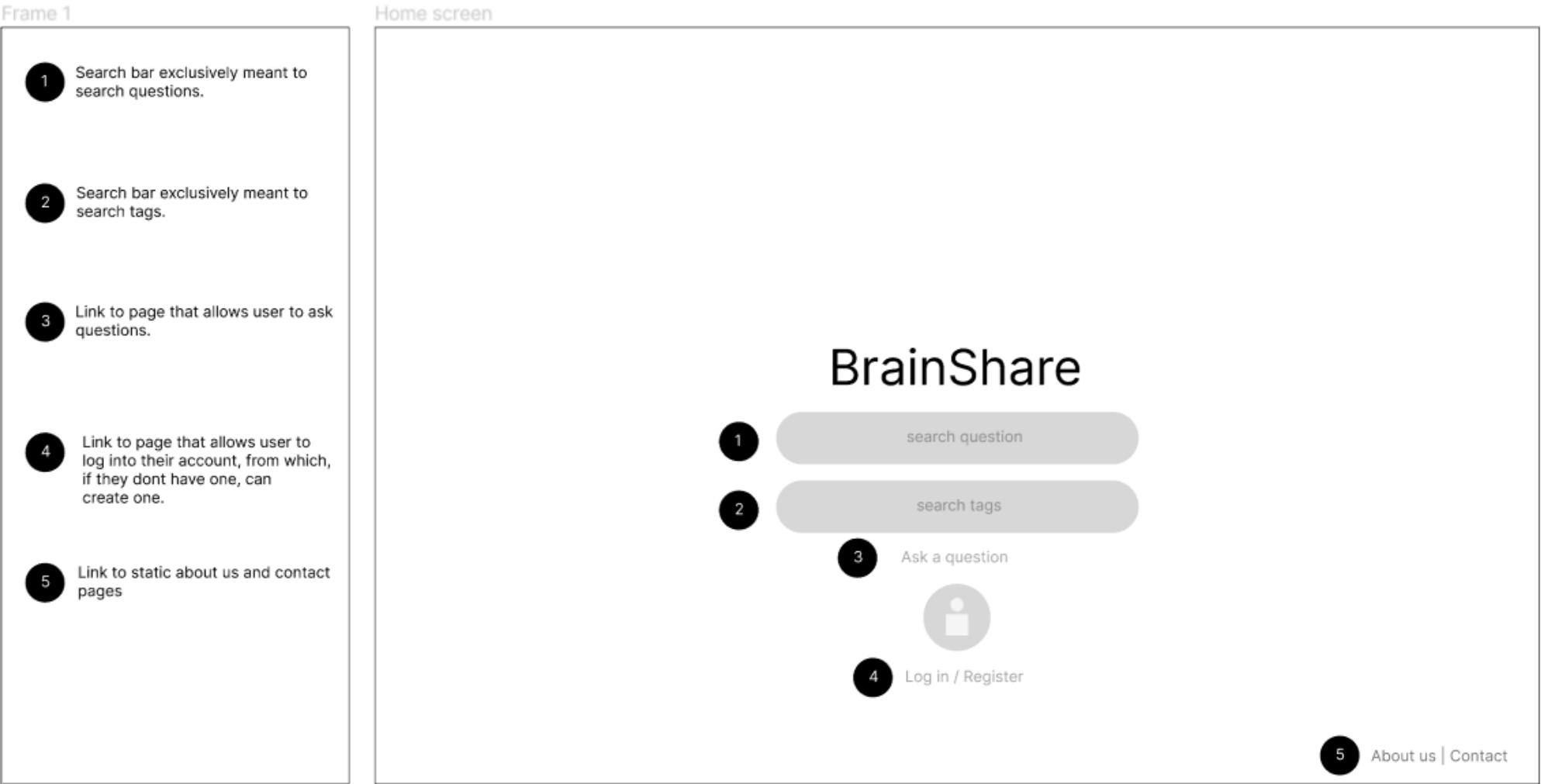


Figure 2: Homepage (UI01) wireframe.

UI10: Question Search Results Page

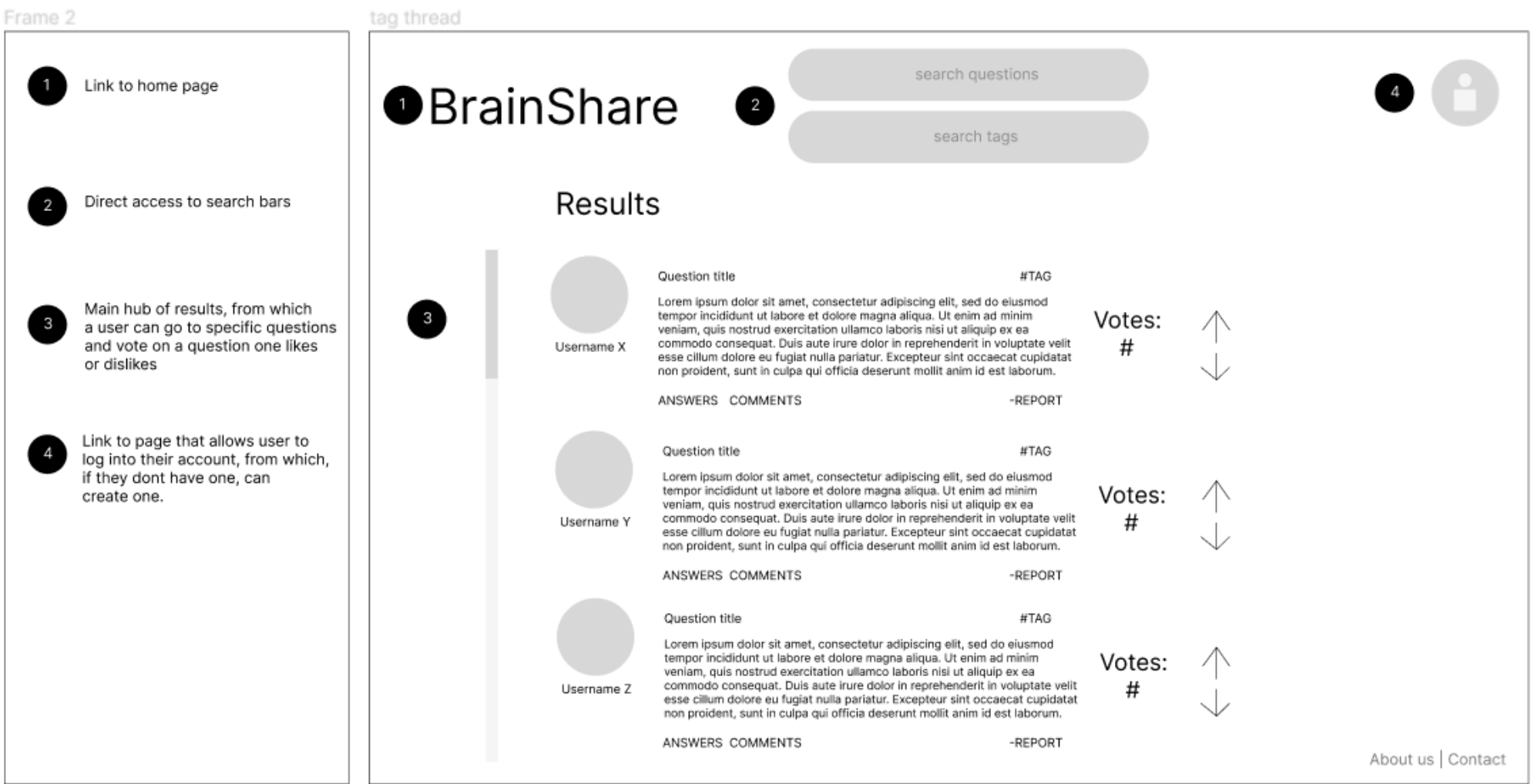


Figure 3: Question Search Results (UI10) wireframe.

Revision history

Changes made to the first submission:

1. A1: Added description of the Notifications feature;
2. A2: Changed Actors Diagram - changed the arrows, connected admin to the rest of the actors and added Owner role;
3. A2: Changed User Stories - Guest only has login/sign up US, mandatory requirements were added to the US, readjustment of US by Actors, added Badges US and changed BR07 and BR09 from BR to US and readjustment of US priorities;
4. A3: Changed Sitemap - Login/Register are a separate authentication section, one more admin page;
5. A3: Changed Wireframe - added information on comments, upvotes, question tags, report button and answers.

- Inês Soares, up202108852@fe.up.pt
- João Padrão, up202108766@fe.up.pt (Editor)
- Samuel Maciel, up202108697@fe.up.pt
- João Ventura, up202302063@fe.up.pt