ER: Requirements Specification Component

A1: Grab n' Build

The main goal of **Grab n' Build** is to set up a web-based store to manage the listing and sale of computer parts, as well as their buyers. The store can be used by amateurs or professional computer enthusiasts building their computers.

All users, including guests, have the ability to Login and Logout, register a new account, recover passwords or delete their accounts, according to business rules, their data is kept but made anonymous. Users are also given access to search features, such as exact match search, full-text search, search over multiple attributes, search filters, with the ability to order results by characteristics such as price, the ability to list products and browse them by categories, view product details and reviews and manage a shopping cart by adding and removing products. Users are separated into two groups: **System Administrators** and **Consumers**.

System Administrators have, aside from default user permissions, the ability to administer other accounts (search, view, edit, create, block, unblock and delete). Aside from managing accounts, administrators can manage stock, add/delete products and manage their information, stock, category and discounts, as well as view their sales statistics. They can also view users' purchase histories and manage their orders and reports. This group is also in charge of editing some of the website's pages like About, Contacts and FAQs. Although Administrators have their own accounts, they do not possess authenticated user privileges such as having a shopping cart or wishlist.

Consumers are able to manage their shopping cart by adding or deleting items on it. Both authenticated and unauthenticated users can do it, but only those who possess an account are able to check-out. **Consumers** can also be split into two different actors: **Guests** and **Authenticated Users**.

Guests are unauthenticated users who have the ability to create an account (if they haven't been registered into the system yet) and login into their own accounts.

Authenticated Users have accounts, linked to a profile that can be viewed and edited by the owner, supporting a wishlist and personal notifications (which should inform of payment approval, change in the order processing stage, a wishlist product being made available and an update to the price of a product in their cart). When creating an order, this group of users should be able to change between multiple payment methods. Every purchase should be able to be viewed on a complete history.

If one places an order, the **Buyer** should be capable to check, track or even cancel the order if needed.

Reviewers are Buyers who can post a review about a product they acquired. Reviews should be treated not only editable (by the owner), but also deletable as well (by both review owner and System Administrators).

The system should also support Help features such as placeholders for forms, contextual error messages and help, as well as Product Information: an "About Us", listing of main features and contacts.

A2: Actors and User stories

> This artefact contains the specification of the actors and their user stories, serving as agile documentation of the project requirements.

1. Actors
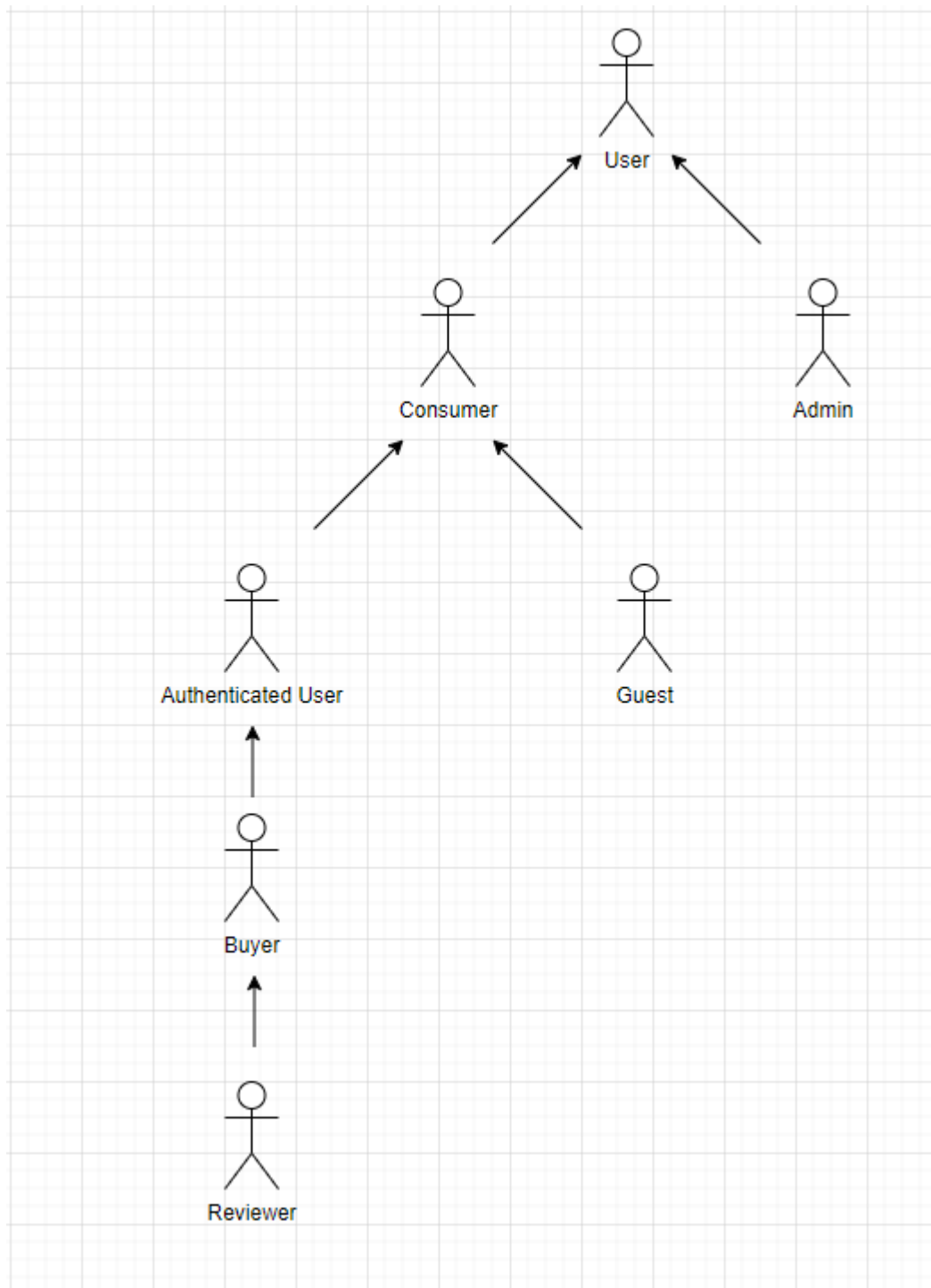
Identifier	Description
User	Generic User with access to public information.
Consumer	Generic User that can add products to his shopping cart, but can't check them out, unless authenticated.
Administrator	Authenticated User that can't check-out or make purchases but manages the website, from user reports to product management.

Identifier	Description
Authenticated User	Authenticated User that can access site features such as checking out and managing their account.
Guest	Unauthenticated User that can create an account and/or log in.
Buyer	Authenticated User who placed an order, with the ability to manage it, and even post a review.
Reviewer	Authenticated User that has placed a review and can manage, edit or delete it.

2. User Stories

2.1. User

Identifier	Name	Priority	Description
US01	Home	High	As a *User*, I want to access the Home page, so that I can be introduced to the website.
US02	FAQ	High	As a *User*, I want to access the FAQ page, so that I can look for an answer to a question I might have.
US03	Contacts	High	As a *User*, I want to access the Contacts Page, so that I can easily retrieve the website founders' contacts.
US04	About	High	As a *User*, I want to access the About page, so that I can get to know what the website is focused on and how it was created.
US05	Search using the Navigation Menu	High	As a *User*, I want to search for a group of products using the navigation menu so that I can easily find what I'm looking for.
US06	Searching using the Search Bar	High	As a *User*, I want to search for products using the search bar, so that I can use keywords to find what I'm looking for more accurately.
US07	Filter serch results	High	As a *User*, I want to apply filters to search results, so that I can exclude products I'm not interested in.
US08	Sort search results	High	As a *User*, I want to sort the search results using an attribute, so that I can rearrange the list of results in a more accessible way.
US09	Access product page	High	As a *User*, I want to access a product page, so that I can get access to detailed information and specifications

2.2. Consumer

Identifier	Name	Priority	Description

Identifier	Name	Priority	Description
US11	Manage Cart	High	As a *Consumer*, I want to add/delete products to my shopping cart, so that I'm able to list what I can later check out.

2.3. Administrator

Identifier	Name	Priority	Description
US21	Manage products	High	As an *Administrator*, I want to add/delete products from the system, so that the product's stock is up-to-date.
US22	Edit a product	High	As an *Administrator*, I want to edit a product's information, so that it reflects its characteristics.
US23	Manage categories	High	As an *Administrator*, I want to add/delete categories from the system, so that the available categories and respective products can be displayed correctly.
US24	Edit Products Categories	High	As an *Administrator*, I want to change a product's category, so that it better fits into a group of products with similar characteristics.
US25	Delete Users	High	As an *Administrator*, I want to delete user accounts, so that the user no longer exists in the system.
US26	Unblock User	High	As an *Administrator*, I want to unblock User accounts, so that the banned Users can re-access the system's privileged features.
US27	Block User	High	As an *Administrator*, I want to block User accounts, so that the users are forbidden to access the system's privileged features.
US28	Check a user purchase history	High	As an *Administrator*, I want to check on the Users' purchase history, so that I can be aware of all transactions occurred so far.
US29	Manage Order Status	High	As an *Administrator*, I want to manage an order status, so that the User's order can be tracked correctly.
US210	Manage FAQs	High	As an *Administrator*, I want to add/delete FAQs, so that important and frequent questions are up-to-date.
US211	Edit FAQs	High	As an *Administrator*, I want to edit FAQs, so that the questions and answers can be written more understandably.
US212	Edit Contacts Page	High	As an *Administrator*, I want to edit the information displayed on the "Contacts" page, so that the owner's contacts are up-to-date.
US213	Edit About Page	Low	As an *Administrator*, I want to edit the information displayed on the "About" page, so that the website's details are up-to-date.

2.4. Authenticated User

Identifier	Name	Priority	Description
US31	Profile	High	As an *Authenticated User*, I want to view and edit my profile, to keep track of my information.
US32	Check Notifications	High	As an *Authenticated User*, I want to receive notifications, so that I am warned about events that might interest me: payment approval, change in the order processing stage, a wishlist product being made available and an update to the price of a product in my cart.
US33	Check-out	High	As an *Authenticated User*, I want to check-out my current cart, to purchase the items I've added to it.
US34	Payment	High	As an *Authenticated User*, I want to manage my payment methods and account credits, to control how I pay for my
US35	Delete Account	High	As an *Authenticated User*, I want to delete my account, to preserve my privacy.
US36	Report Reviews	High	As an *Authenticated User*, I want to report reviews I view as misleading, to keep products free of misinformation.
US37	Sign-out	High	As an *Authenticated User*, I want to log out of my account, so that I can close it out.
US38	Check Purchase History	High	As an *Authenticated User*, I want to view the history of my previous purchase, so that I can keep track of my expenditures in the system.
US39	Vote on a Review	Medium	As an *Authenticated User*, I want to vote if a review was helpful or not, so that the review becomes more trustworthy.
US310	Wishlist	Low	As an *Authenticated User*, I want to manage a wishlist, to keep track of items I'd like to buy in the feature

2.5. Guest

Identifier	Name	Priority	Description
US41	Sign-In	High	As a *Guest*, I want to login into my account, so that I can get authenticated user privilege.
US42	Sign-Up	High	As a *Guest*, I want to create an account, so that I'm able to authenticate into the system.

2.6. Buyer

Identifier	Name	Priority	Description

Identifier	Name	Priority	Description
US51	View Order	High	As a *Buyer*, I want to check on my order, so that I can check on its details.
US52	Track Order	High	As a *Buyer*, I want to track my order, so that I know when it's getting delivered.
US53	Cancel Order	High	As a *Buyer*, I want to cancel my order, so that I can get my money back.

2.6. Reviewer

Identifier	Name	Priority	Description
US61	Post Review	High	As a *Reviewer*, I want to post a review, so that other people can view my opinion about a product.
US62	Edit Review	High	As a *Reviewer*, I want to edit my review, so that I can express my opinion more accurately.
US63	Delete review	High	As a *Reviewer*, I want to delete my review, so that the review becomes unavailable to other users.

3. Supplementary Requirements

This section contains tables for business rules, technical requirementes and restrictions.

3.1. Business rules

Identifier	Name	Description
BR01	Deletion	Shared user data, such as reviews, should be kept if the respective user deletes their account (US25/US35), with the author anonymized.
BR02	Administrators	Administrators are independent of regular users and should not engage with purchasing features.
BR03	Delivery Date	The delivery date must be greater than the purchase date for an item that has been purchased by a buyer.
BR04	Reviews	Reviewers cannot vote for their own reviews.

3.2. Technical requirements

Identifier	Name	Description
TR01	Performance	The system's response time should be less than 2s to reduce user frustration.
TR02	Robustness	The system should continue running and be capable of handling runtime errors.

Identifier	Name	Description
TR03	Scalability	The system must be able to handle the growth of users and actions.
TR04	Accessibility	The system must ensure it can be used by any user, regardless of possible disabilities they may have or web browsers used.
TR05	**Security**	**The system shall protect sensitive information from unauthorised access through the use of an authentication system. This is critical as the system handles the payment and financial information and security failures could cost the users.**
TR06	**Ethics**	**The system must respect ethical principles with regards to data collection and sharing (must require user acknowledgement). As the system handles purchases and users' payment information, ensuring trust is critical.**
TR07	**Web Application**	**The system is to be implemented as a web application with dynamic pages, utilizing standard HTML, CSS etc. Users must be able to access and use the site using standard web software.**

Highlighted Techinical Requirements are most critical for the system.

3.3. Restrictions

A restriction on the design limits the degree of freedom in the search for a solution.

No restrictions created for this system

A3: Information Architecture

The Information Architecture artefact provides a high-level overview of the system's information architecture. The main objectives are listed below:

- Contribute to the identification and description of user needs, as well as the generation of new ones;
- Examine and test the UI of the product;
- Allow for several iterations of the user interface design in a short amount of time.

There are two components to this artefact:

- A sitemap;
- A pair of wireframes.

1. Sitemap

A sitemap is a diagrammatic representation of a hierarchical system that provides a visual representation of the relationship between all the pages of a website. The sitemap of Grab 'n Build separate the website pages in five main areas:

- **Website Info:** the pages that provides general information about the system for users;
- **Admin Pages:** the pages with administrator features;

- **Item Catalog:** the pages used to access and search products;
- **User Pages:** the individual pages for users;
- **Authentication:** the page that visitors get authenticated.
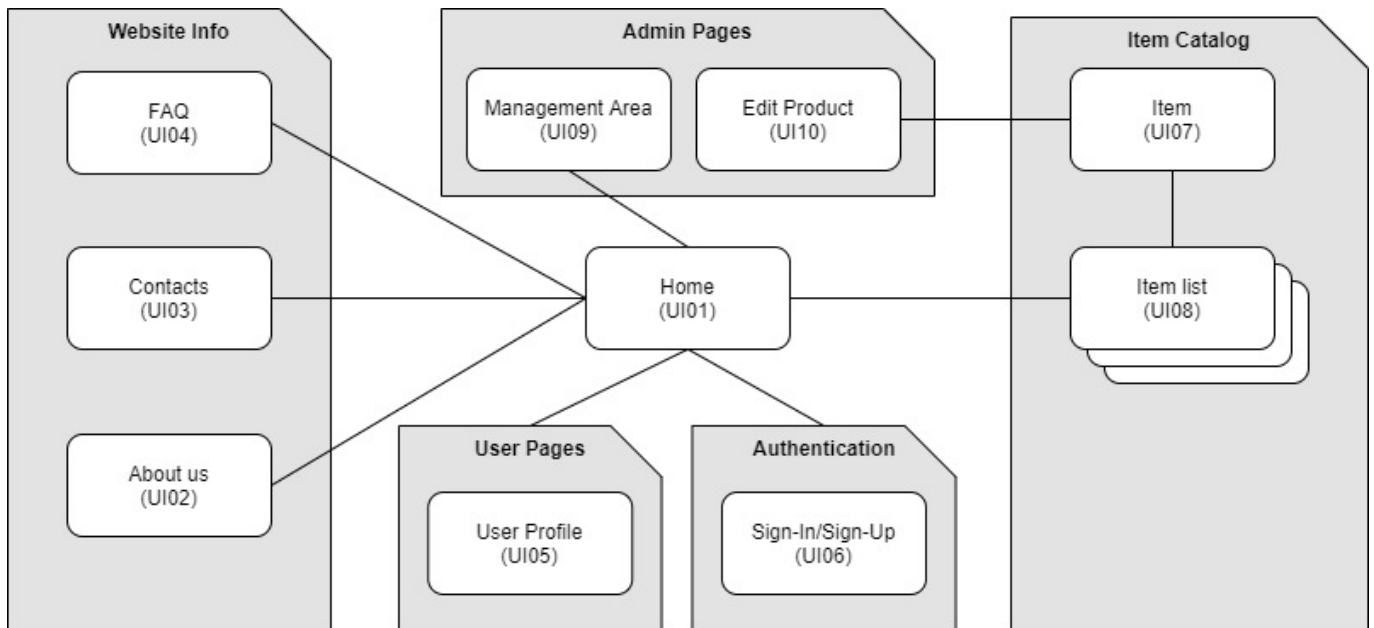
2. Wireframes

A website wireframe is a visual representation of a website's skeleton architecture. Below there are two wireframes, one is a representation of what the item page resembles, while the other one reveals how the user profile looks like.

UI07: Item page

1. Breadcrumbs help the user navigate the website, making them aware of their current location within the website;
2. The search feature is available throughout the whole website;
3. The selected tab is distinguishable from the unselected one due to its size.
4. Buyers can easily add products to their wishlist, as well as their cart;

UI05: User Profile
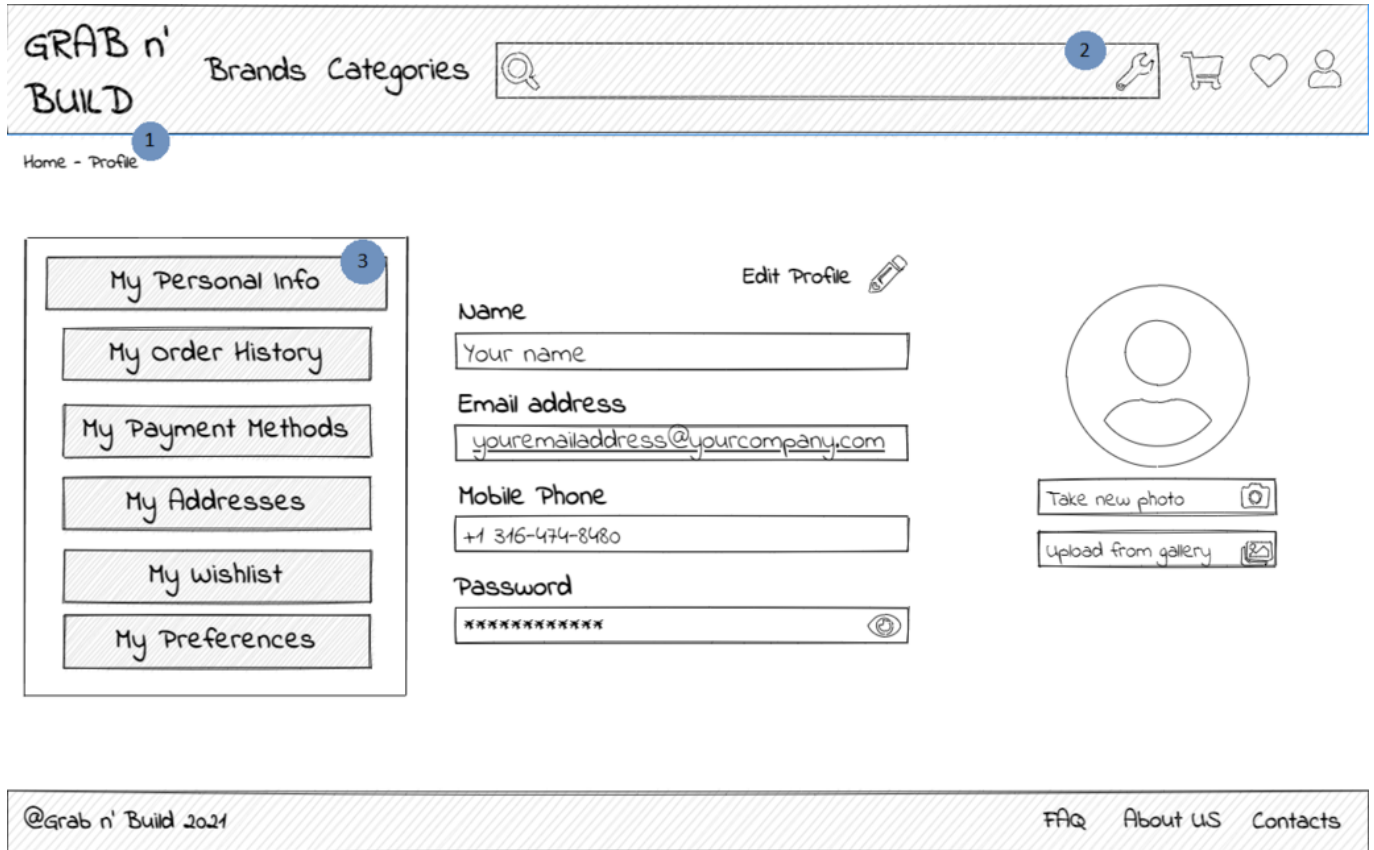
1. Breadcrumbs help the user navigate the website, making them aware of their current location within the website;
2. The search feature is available throughout the whole website;
3. The selected tab is distinguishable from the unselected one due to its size.

Revision history

Changes made to the first submission:

1. Added A1
2. Added part of wireframes
3. Added A2
4. A3 finished

GROUP2175, 10/11/2021

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