ER: Requirements Specification Component

SportsVerse! The only place you need for a healthy and active lifestyle

A1: SportsVerse

The SportsVerse project is under development by a small team (stakeholders*), part of a web development company, targeting people that want to consult and order sports clothing, equipment, and supplementation from anywhere they want.

The main goal of this project is the elaboration of a web-based application that acts as a system to manage an online store. This is a tool whose goal is to ease online shopping, saving customers precious time.

SportsVerse allows users to navigate through the whole list of products and their reviews, being able to search them by name, category, sort by price and also add them to the cart. Users are divided into groups with different permissions: guests, authenticated users, buyers, and product reviewers. Guests, which are not logged in, will be promoted to authenticated users after doing so, enabling them to checkout their orders, wishlist products, manage their preferences and also view their purchase history.

After buying a product, Authenticated Users will be considered buyers, having the power to manage and cancel their purchase and the respective delivery, as well as to review it (if so, they will be considered product reviewers). These last two are product-specific roles. On the other hand, to assure a good experience for the users, a team of administrators will have higher permissions to manage all users' purchases, as well as the respective deliveries, being able to change their state and other crucial data, in addition to the control of the exposed products.

Finally, the platform will have an adaptive design, enhancing the user experience, regardless of the device being used. In that way, everybody can enjoy the benefits of this website.

*developers, brand, users, and administrators are all considered stakeholders

---

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.
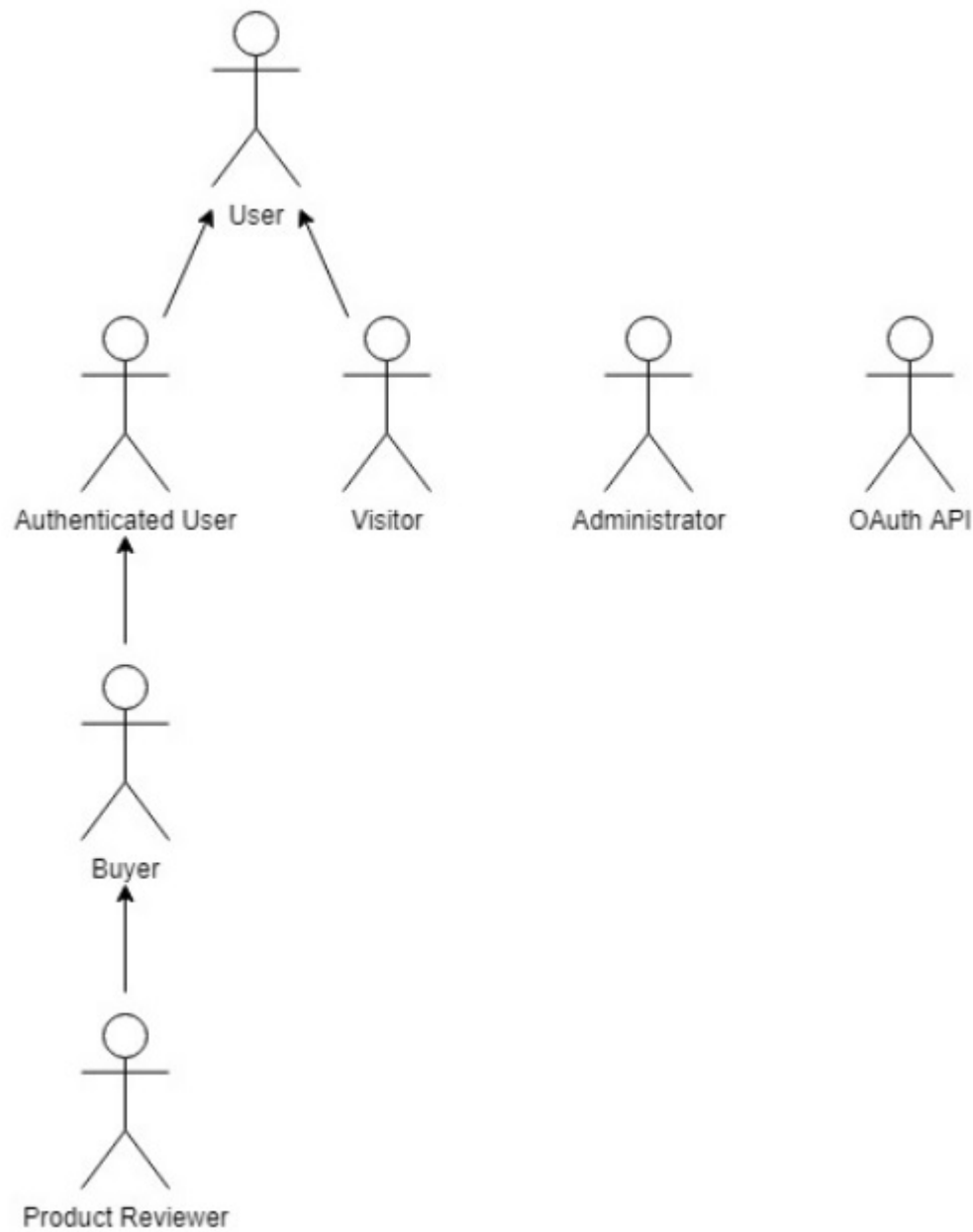
1. Actors

Figure 1: SportVerse actors.

Identifier	Description
User	Generic user that has access to public information, such as the list of products and their reviews
Visitor	Unauthenticated user that can register itself (sign-up) or sign in to the system
Authenticated User	Authenticated user that can manage his own preferences, check out his purchases and write reviews
Buyer	Authenticated user that can review bought products as well as track and cancel his orders
Product Reviewer	Authenticated user that can edit and remove his own review
Administrator	Specific account that is responsible for the management of products and for some specific supervisory and moderation functions

Identifier	Description
OAuth API	External OAuth API that can be used to register or authenticate into the system

Table 1: SportVerse actors description.

2. User Stories

User stories for the SportsVerse system.

2.1. User

Identifier	Name	Priority	Description
US101	View Products List	high	As a User, I want to be able to see the products list, so that I can view what the shop has to offer
US102	View Product Details	high	As a User, I want to view the product details, so that I can know more about it
US103	Add Product to Shopping Cart	high	As a User, I want to add products to my shopping cart, so that I can list the products I want to buy
US104	Manage Shopping Cart	high	As a User, I want to manage my shopping cart, so that I can change the list of products I want to buy
US105	Search Products	high	As a User, I want to search the platform keywords, so that I can quickly find the items that I am looking for
US106	See Home	high	As a User, I want to access the home page, so that I can see a brief presentation of the website
US107	Browse Product Categories	high	As a User, I want to browse through product categories, so that I can view a specific selection of products
US108	See About	high	As a User, I want to access the about page, so that I can see a complete description of the website and its creators
US109	Consult Services	high	As a User, I want to be able to access the services information, so that I can see the website's services
US110	Consult FAQ	high	As a User, I want to access the FAQ, so that I can get quick answers to common questions
US111	Consult Contacts	high	As a User, I want to access contacts, so that I can come in touch with the platform creators
US112	View Product Reviews	high	As a User, I want to view product reviews, so that I can know what other users think about those products
US113	Sort Products	medium	As a User, I want to be able to sort products, so that I can quickly view the products I'm interested in

Table 2: User user stories.

2.2. Visitor

Identifier	Name	Priority	Description
US201	sign in	high	As a Visitor, I want to authenticate into the system, so that I can access privileged information
US202	Sign-up	high	As a Visitor, I want to register myself into the system, so that I can authenticate myself into the system
US203	OAuth API Sign in	low	As a Visitor, I want to sign in through my Google account, so that I can authenticate myself into the system
US204	OAuth API Sign-up	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

Table 3: Visitor user stories.

2.3. Authenticated User

Identifier	Name	Priority	Description
US301	Manage Account Information	high	As an Authenticated User, I want to be able to manage my account information, so that I can change it at any time
US302	Checkout	high	As an Authenticated User, I want to be able to checkout my order, so that I can buy it
US303	Log out	high	As an Authenticated User, I want to be able to log out from my account, so that I can protect my account
US304	View Purchase History	high	As an Authenticated User, I want to be able to view my purchase history, so that I can see what I have bought
US305	Manage Wishlist	medium	As an Authenticated User, I want to be able to manage my wishlist, so that I may untrack any product I don't wish to receive a notification about
US306	Add Product to Wishlist	medium	As an Authenticated User, I want to add a product to my wishlist, so that I may track its availability
US307	Add Payment Method	medium	As an Authenticated User, I want to be able to add a payment method, so that I can pay my order
US308	Product in Wishlist Availability Notification	medium	As an Authenticated User, I want to be notified if a product in my wishlist is available, so that I may be able to buy that product

Identifier	Name	Priority	Description
US309	Product on Cart Price Change Notification	medium	As an Authenticated User, I want to be notified if a product on my cart changed prices, so that I may be able to make a decision upon it
US310	Manage Multiple Payment Methods	low	As an Authenticated User, I want to be able to manage multiple payment methods, so that I can choose different methods at checkout
US311	Have Product Recommendations	low	As an Authenticated User, I want to receive product recommendations, so that I may be prompt with recommended products I may want to buy
US312	Manage Account Credits	low	As an Authenticated User, I want to be able to manage account credits, so that I may be able to buy products with it

Table 4: Authenticated User user stories.

2.4. Buyer

Identifier	Name	Priority	Description
US401	Review Purchased Product	medium	As a Buyer, I want to be able to give a review to a product that I have bought, so that I can share my opinion of it to the platform
US402	Track Order	medium	As a Buyer, I want to be able to track an order, so that I may know its status at any time
US403	Cancel Order	medium	As a Buyer, I want to be able to cancel an order, so that I may have my money refunded and return the products
US404	Payment Approved Notification	medium	As a Buyer, I want to be notified if my payment was approved, so that I know if the order may be proceeded
US405	Order Processing Stage Change Notification	medium	As a Buyer, I want to be notified if my order processing changed state, so that I know if my order is coming

Table 5: Buyer user stories.

2.5. Product Reviewer

Identifier	Name	Priority	Description
US501	Edit Review	medium	As a Product Reviewer, I want to be able to edit my review, so that I can share my new opinion on the product
US502	Remove Review	medium	As a Product Reviewer, I want to be able to remove my review, so that it disappears from the platform

Table 6: Product Reviewer user stories.

2.6. Administrator

Identifier	Name	Priority	Description
US601	Manage Order Status	medium	As an Admin, I want to be able to manage the order status, so that the User may know the status up-to-date
US602	Add Product	medium	As an Admin, I want to be able to add products to the platform, so that Users may be able to buy them
US603	Manage Products Information	medium	As an Admin, I want to be able to change a product's information, so that it is up-to-date
US604	Manage Product Stock	medium	As an Admin, I want to be able to manage a product's stock, so that its availability is up-to-date
US605	Manage Products Categories	medium	As an Admin, I want to be able to manage a product's category, so that it may be up-to-date
US606	View User's Purchase History	medium	As an Admin, I want to be able to view a user's purchase history, so that I can recomend him the adequate products
US607	Remove reviews	medium	As an Admin, I want to remove a review, so that I can remove inappropriate content
US608	View Sales Statistics	low	As an Admin, I want to be able to view sales statistics, so that I may be able to see how frequent a product is bought
US609	Manage Product Discounts	low	As an Admin, I want to be able to manage product discounts, so that I may be able to give the platform discount offers
US610	Manage Reports	low	As an Admin, I want to be able to manage reports, so that I can take the adequate decision upon them

Table 7: Admin user stories.

3. Supplementary Requirements

3.1. Business rules

Identifier	Name	Description
BR01	Administrators Aren't Users	Administrators accounts are independent of the user accounts, i.e. they cannot buy products.
BR02	Give a review	Reviews can only be made after a product has been received by the buyer.

Identifier	Name	Description
BR03	Answer Reviews	Reviews relate to products only and therefore can't be answered by other users.
BR04	User Deletion	When an authenticated user account gets deleted, all the reviews made are still available on the website as an anonymous user, as well as the purchase history
BR05	Product Orderering	A product can only be ordered, by an authenticated user, if there is at least a single unit in stock and at most, the same amount available.
BR06	Product Info	On the product page, there must be a name, price, number of items to order, a short and a detailed description and the review list.
BR06	Dates	The dates of any action must be in agreement with any prior and/or post action taken, e.g. the log-out date must come after the log-in date.

Table 8: SportsVerse business rules.

3.2. Technical requirements

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 SportsVerse system is designed to be used by media consumers of all ages, with or without technical experience, so very good usability is a critical requirement.**
TR04	Performance	The system should have response times shorter than 2 s to ensure the user's attention.
TR05	Web application	The system should be implemented as a web application with dynamic pages (HTML5, JavaScript, CSS3 and PHP). It is critical that the SportsVerse system is easily accessible from anywhere without the need to install specific applications or software, adopting standard web technologies.
TR06	Portability	The server-side system should work across multiple platforms (Linux, Mac OS, etc.). The SportsVerse system is destined for personal use. To make it easily available to a large user base, it should be platform-independent.
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 unauthorized access through the use of an authentication and verification system. This is crucial due to the critical information disclosed by the users.**

Identifier	Name	Description
TR09	Robustness	The system must be prepared to handle and continue operating when runtime errors occur.
TR10	Scalability	The system must be prepared to deal with the growth in the number of users and their actions.
TR11	**Ethics**	**The system must respect the ethical principles in software development (for example, personal user details, or usage data, should not be collected nor shared without full acknowledgment and authorization from its owner) as a lot of the information disclosed is classified.**

Table 9: SportsVerse technical requirements.

3.3. Restrictions

Identifier	Name	Description
C01	Deadline	The system should be ready to be used before the project deadline.

Table 10: SportVerse project restrictions.

A3: Information Architecture

This artifact presents a brief overview of the information architecture of the system to be developed. It has the following goals:

- Help to identify and describe the user requirements, and raise new ones;
- Preview and empirically test the user interface of the product to be developed;
- Enable quick and multiple iterations on the design of the user interface.

1. Sitemap

SportsVerse system is organized in five main areas:

- User Pages → Individual user page and others related to personal services to the users;
- Administration Pages → Exclusive for the Administrators, to keep users always updated about orders and products;
- Products Pages → Used to access the items collection and its specifications;
- Checkout Pages → Deals with the processing of an order;
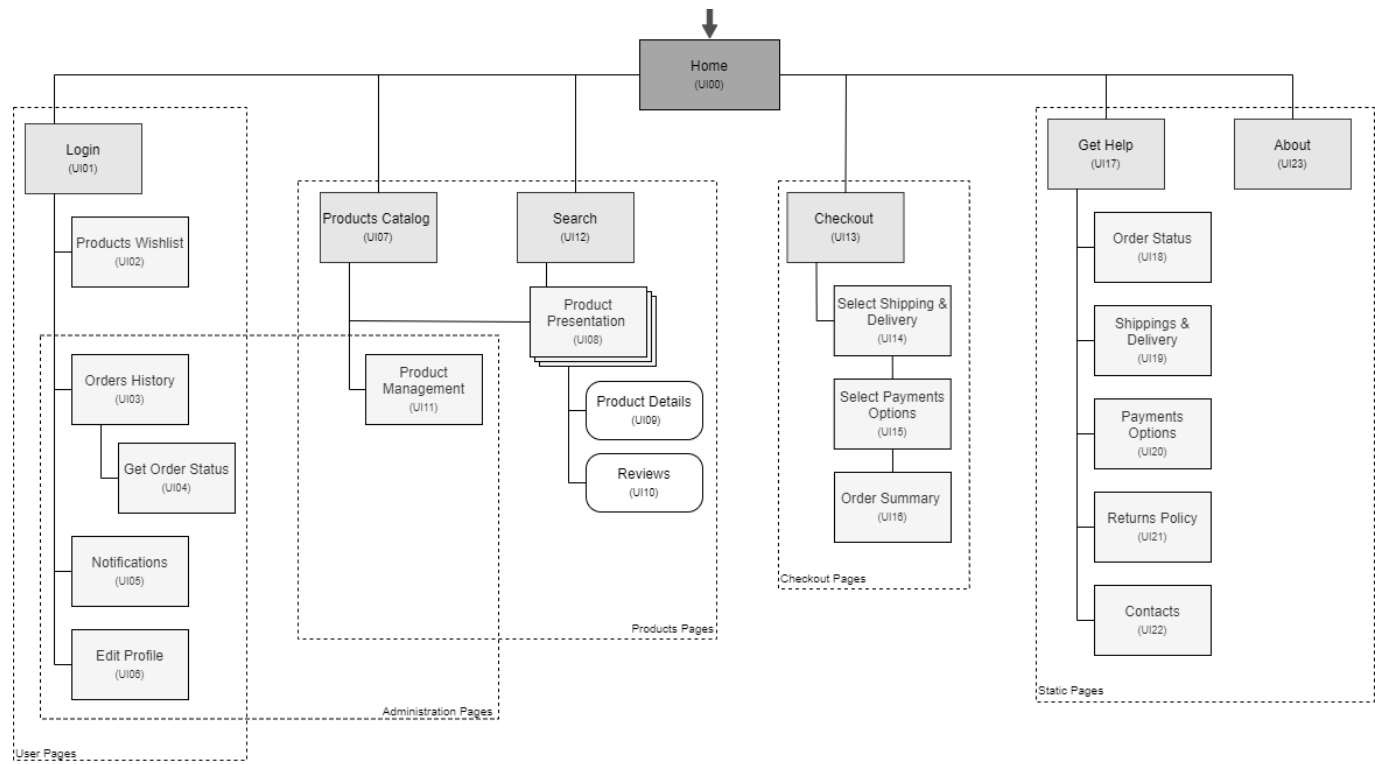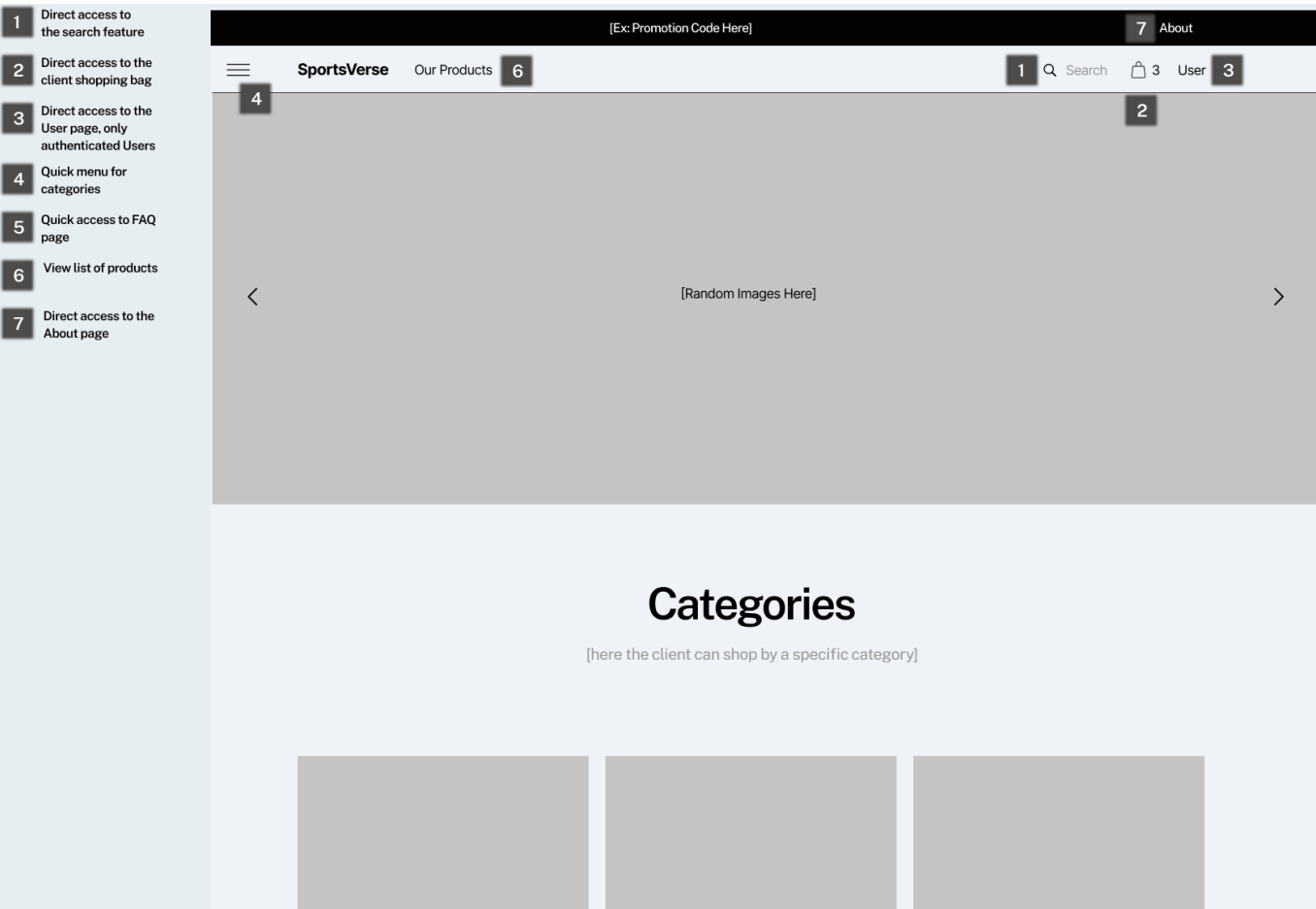- Static Pages → Provide general information about the system;

Figure 1: SportsVerse sitemap.

2. Wireframes

For the SportsVerse system, the wireframes for the Home Page (UI00) and the Product Presentation Page (UI02) are presented in Figures 2 and 3, respectively.
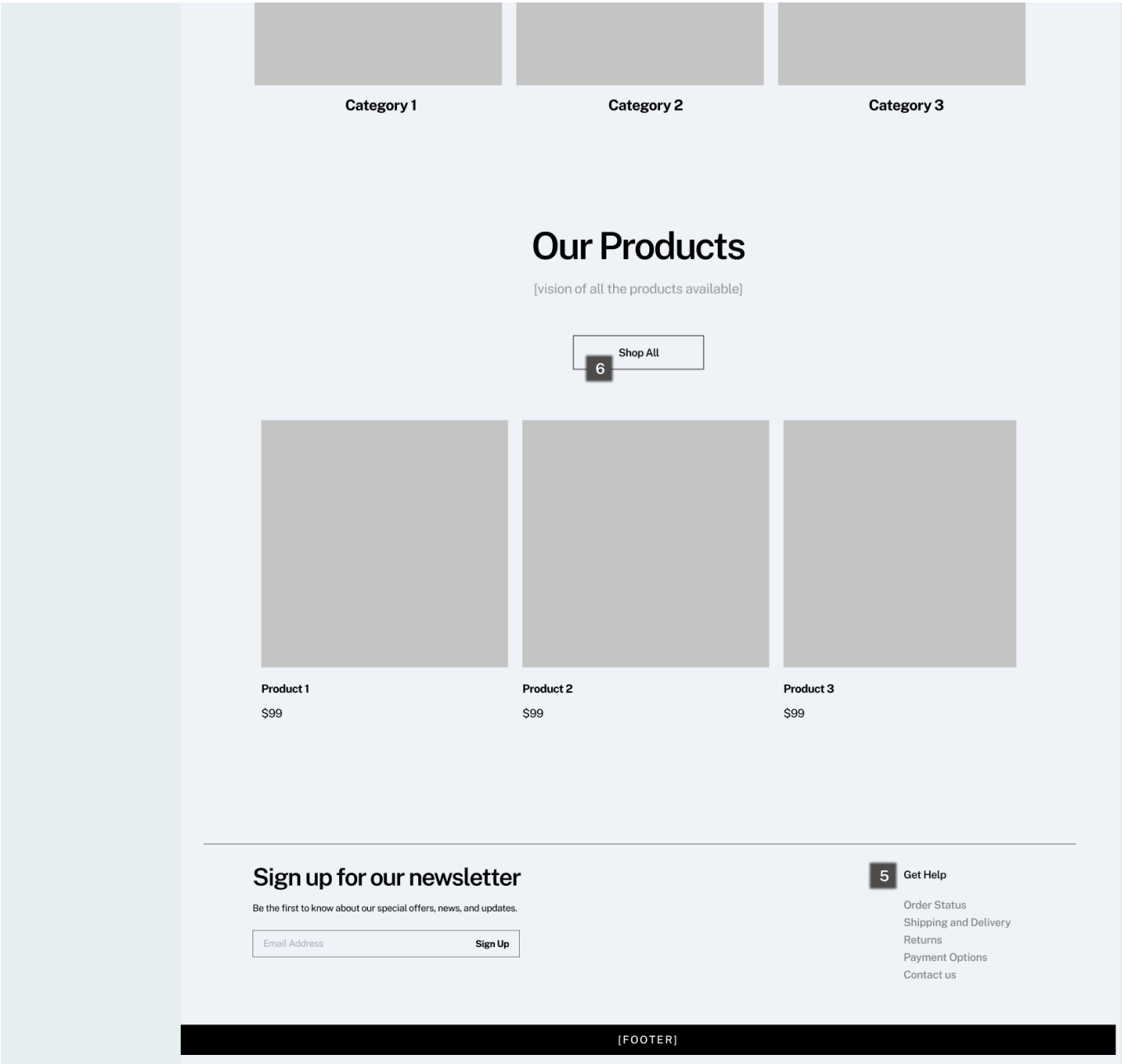
UI00: Home Page

Figure 2: Home Page (UI00) wireframe.
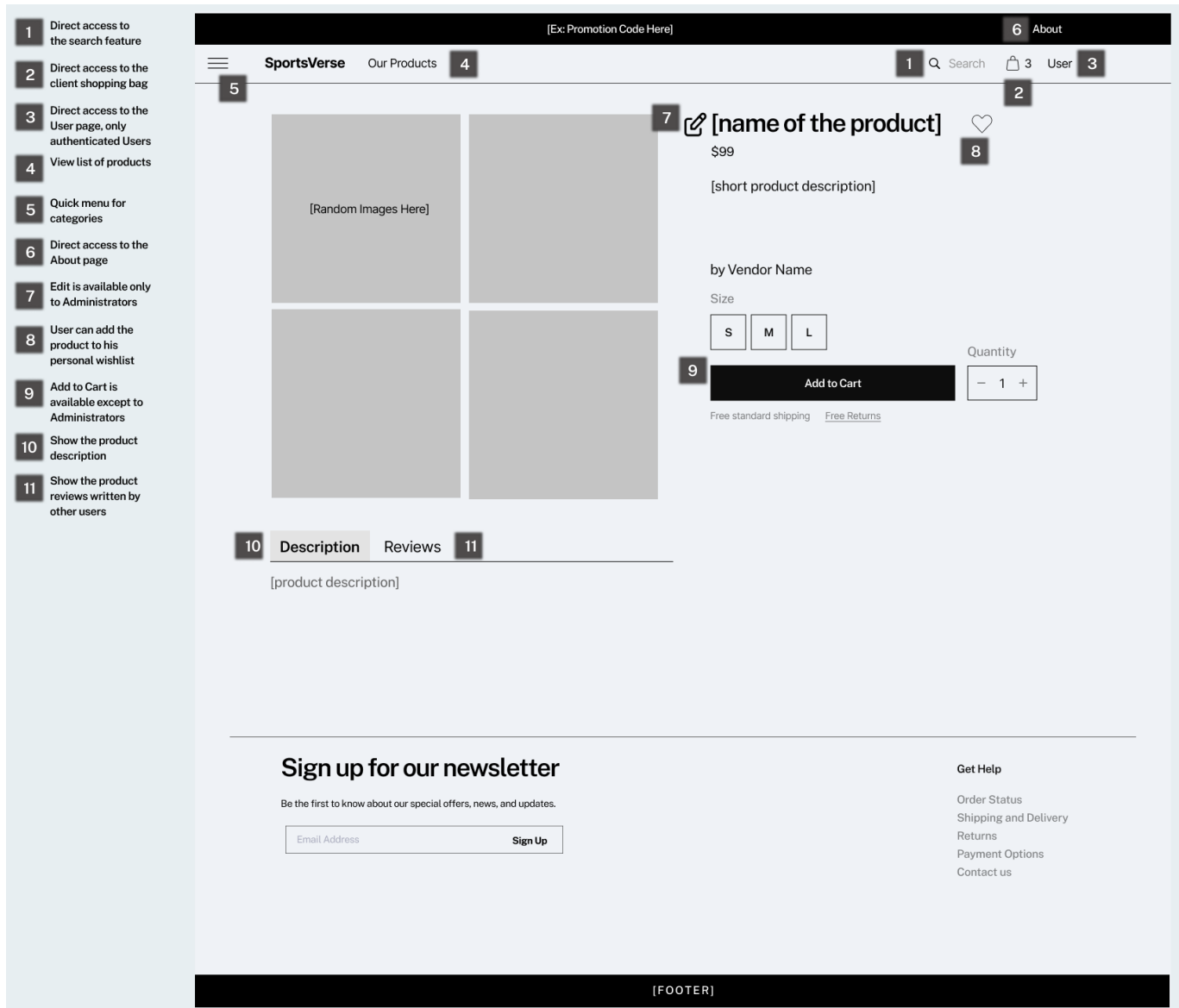
UI02: Product Presentation

Figure 3: Product Presentation Page (UI02) wireframe.

Revision history

Changes made to the first submission:

1. Changed user stories priorities

GROUP2223, 02/10/2022

- Bárbara Ema Pinto Rodrigues, up202007163@fe.up.pt
- Henrique Oliveira Silva, up202007242@fe.up.pt
- João Paulo Moreira Araújo, up202004293@fe.up.pt
- Tiago Nunes Moreira Branquinho, up202005567@fe.up.pt