

ZEISS VIEW

Software Requirements Specification

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1. Introduction

1.1 Purpose

This document aims to provide an extensive overview of the sunglasses website, delineating its purpose, functionalities, and interface specifics. It serves as a comprehensive guide for both stakeholders and developers involved in the platform. Within these pages, you'll find a thorough elucidation of the platform's objectives, its key features, and a detailed outline of its user interfaces, elucidating what the platform seeks to accomplish.

1.2 Intended Audience

ID	Stakeholder	Description
S-1	Customer	Reviewing the alignment between business objectives and functional requirements to ensure they meet the expectations of implementing the product.
S-2	Development team	Forming the accurate vision of the project, detailed functional and nonfunctional requirements.
S-3	QA team	Making test-plans and test-cases.
S-4	Project Manager	Estimating the quote of the project, planning resources and the timeline of work.
S-5	User	Based on this document the Terms of Service and the Privacy Policy are created.

1.3 Product Scope

- ❖ Login / Register in application for free.
- ❖ Customer can create a custom sunglasses.
- ❖ Application notifications.
- ❖ Provide a variety of sunglasses.
- ❖ Provide statistics for user purchases number in time (day, month and year).

2. Overall Description

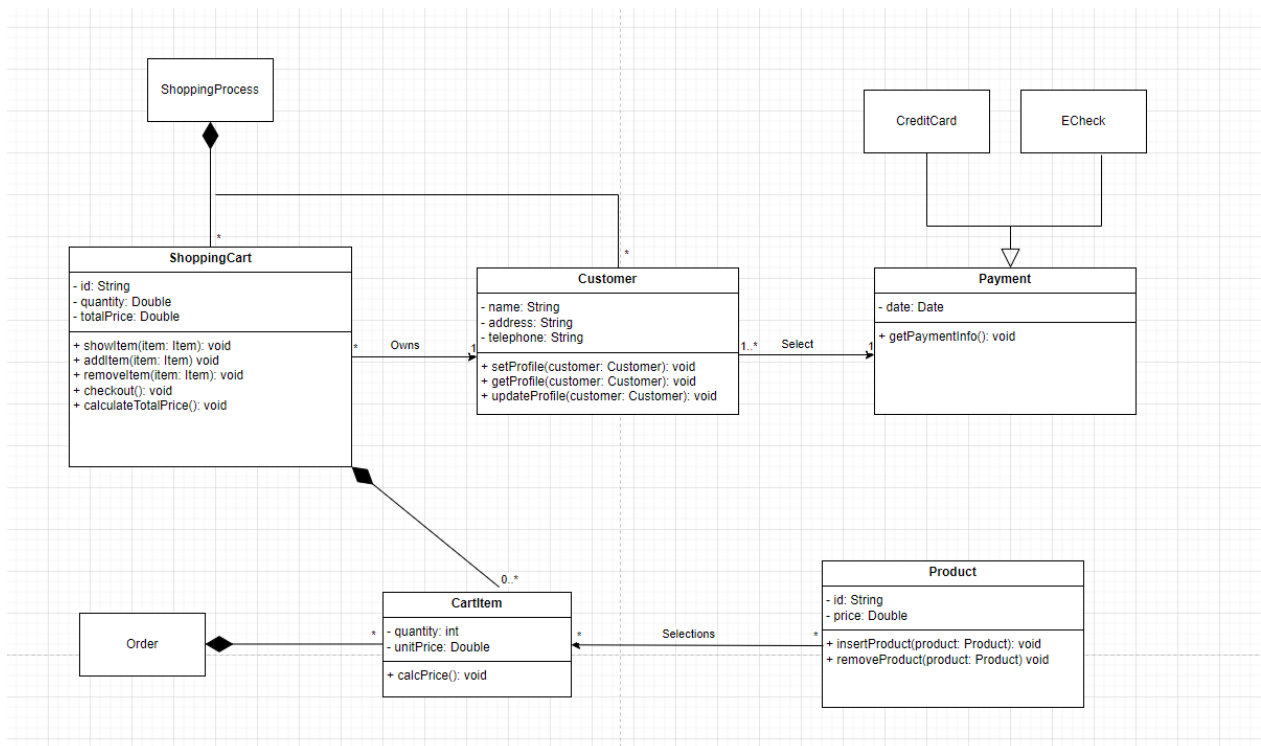
2.1 Product Perspective

- ❖ User account: The application allows the user to create their accounts in the system and provide features of updating and viewing profiles.
- ❖ Number of users being supported: The application is able to support a large number of online users at a time.

2.2 Product Functions

The major functions which the product performs are:

- ❖ A wide variety of sunglasses.
- ❖ To provide an opportunity to create custom sunglasses.



Class diagram 1

2.3 User Classes and Characteristics

ID	User classes	Description
U-1	Signed up user	A user who has completed the sign-up process on the app and successfully activated their account.
U-2	Not signed up user	A user who has completed neither the sign up in the application, nor the account activation. He owns limited rights inside the app.

2.4 Operating Environment

The hardware which is necessary to visit the website is any operation system.

2.5 Design and Implementation Constraints

- ❖ For user authentication (login or registration), the system will rely on OAuth 2.0 protocol, ensuring secure and standardized authentication processes.
- ❖ JSON (JavaScript Object Notation) will serve as the primary data exchange format, enabling lightweight and efficient communication between the frontend and backend systems.
- ❖ Database development will be carried out using PL/SQL, leveraging its powerful features for efficient data management and querying.
- ❖ HTTP communication protocol will be utilized for client-server communication, ensuring interoperability and compatibility across different platforms and devices.
- ❖ Design conventions and programming standards will be established and enforced by our company, promoting consistency, readability, and maintainability of the codebase.

- ❖ Security measures will include hashing of users' passwords using industry-standard algorithms like Bcrypt, ensuring that sensitive information remains protected even in the event of a data breach.

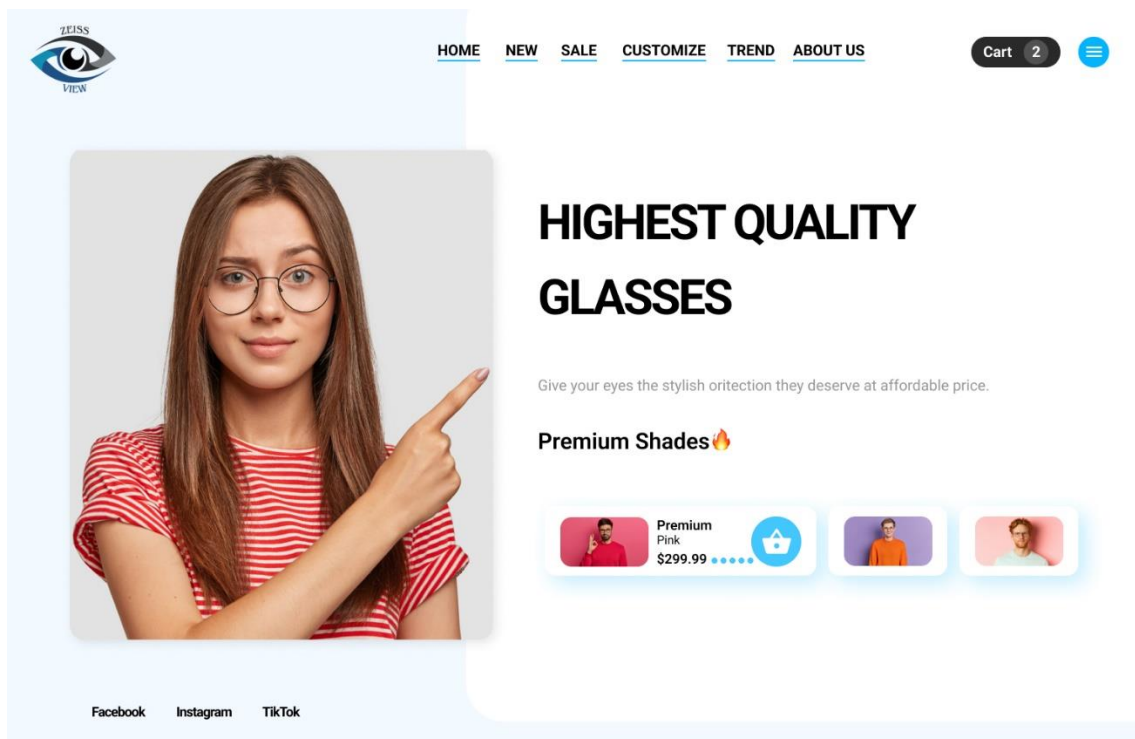
2.6 User Documentation

User Documentation will be available on the website under the “User Documentation” section.

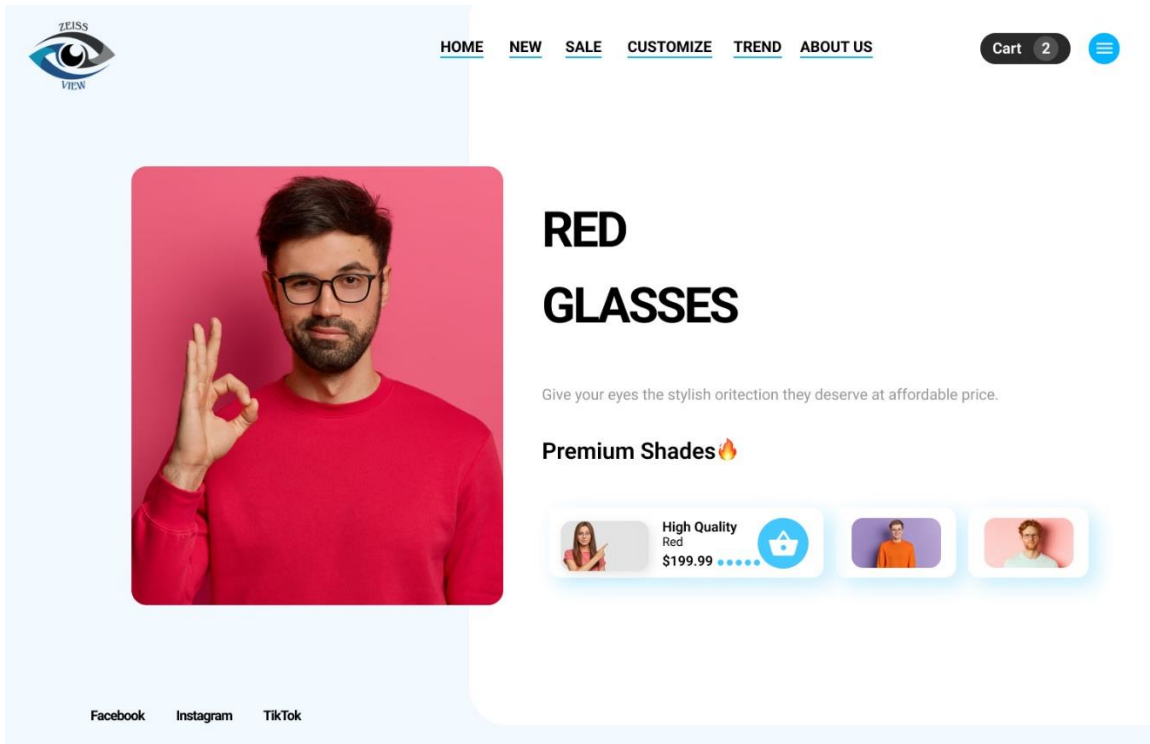
3. External Interface Requirements

3.1 User Interfaces

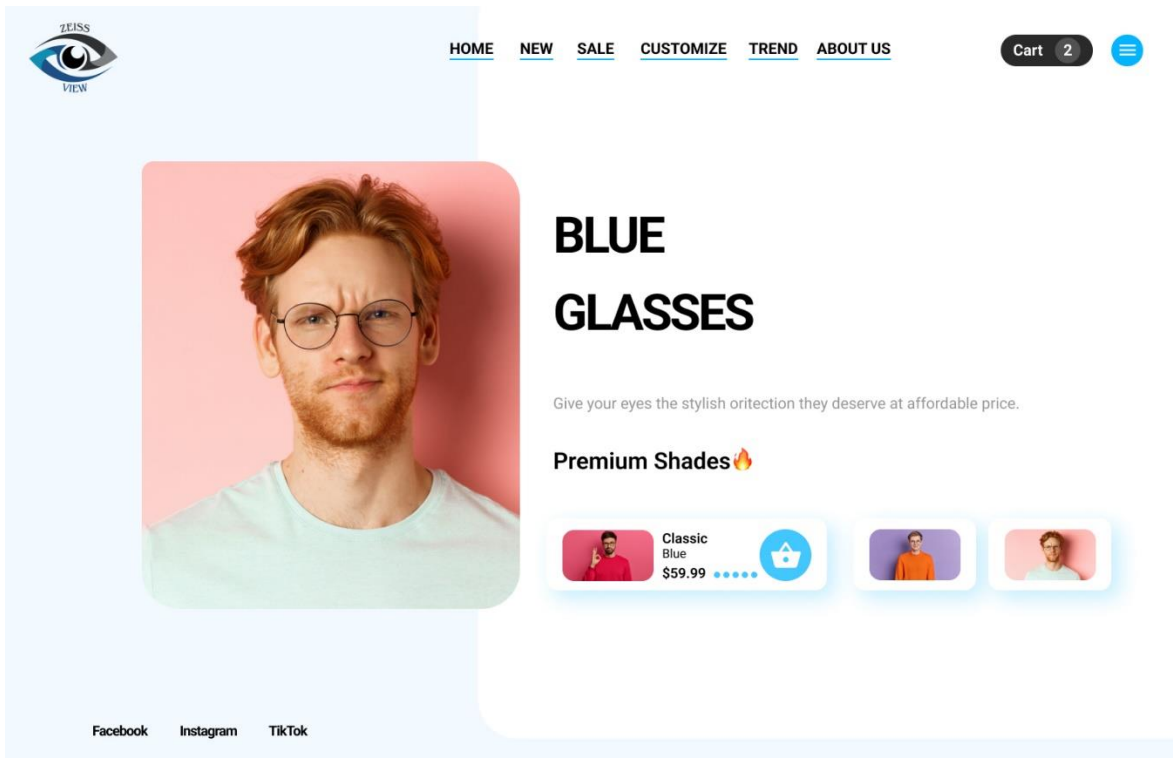
When the user opens the website he/she accesses the Login screen but if he/she is not registered, it's necessary to make it (or login with social media account from left bottom corner). After the user is logged in, he/she will see the Home page where there are have a different type of sunglasses. The user can create a custom sunglasses from “Customize” menu. The button in the right corner is for logout.



Desktop design 1



Desktop design 2



Desktop design 3

3.2 Hardware Interfaces

There are no restrictions about devices. All you need is a device with internet access.

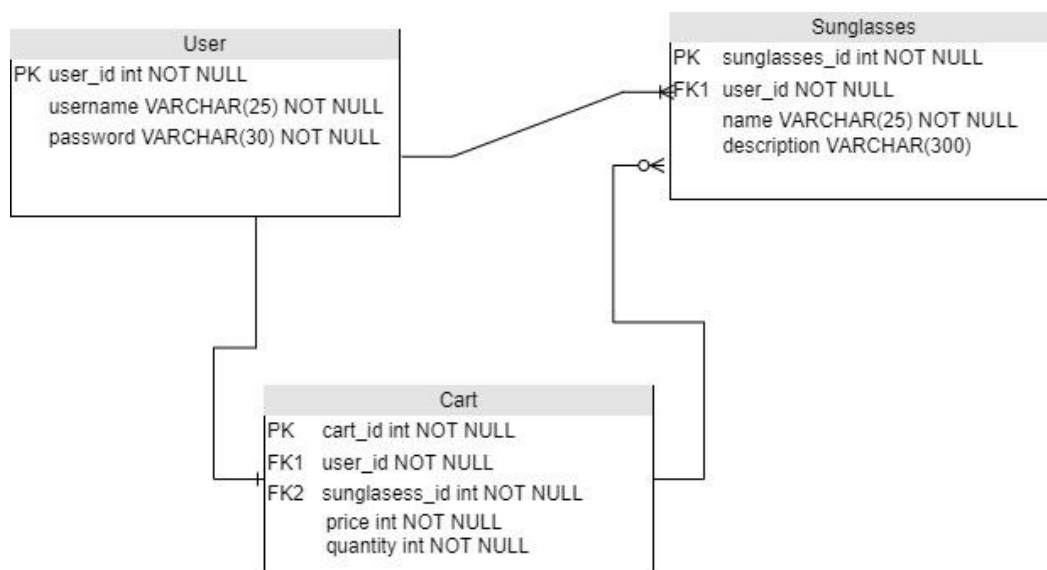
3.3 Software Interfaces

The site is uploaded on Bluehost. PL/SQL developer is our database tool and Eclipse is the IDE which we use for our Java back-end project. Visual Studio code is our choice for front-end project.

3.4 Communications Interfaces

We utilize communication protocols such as HTTP, SSL, etc. A wireless internet connection is essential for the device.

4. Domain model



Domain model 1

The Cart table has two columns ("user_id" and "sunglasses_id") that rely on the "user_id" column from the User table and the "sunglasses_id" column from the Sunglasses table respectively. The column "user_id" in the Sunglasses table relies on the column "user_id" from the User table.

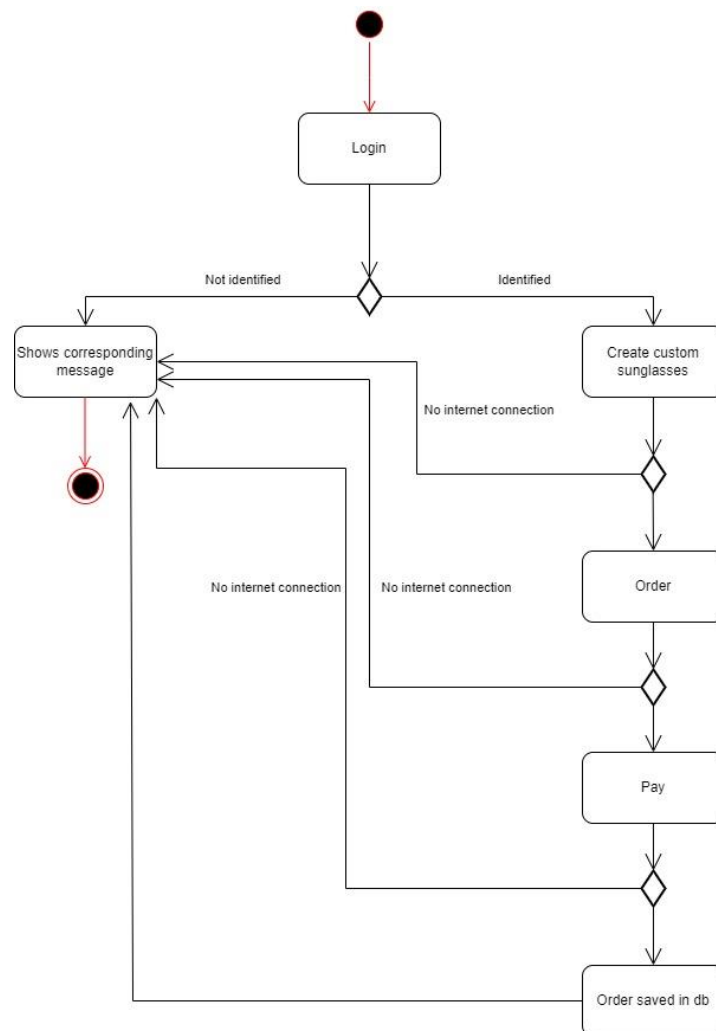
5. System features (Use Cases)

5.1 Use Case: Create Custom Sunglasses

Brief Description:	The user will create a new custom sunglasses.	
Business Trigger:	The business event is the user’s desire to create new sunglasses.	
Preconditions:	The user must be logged in the application.	
Basic Flow: The user successfully logs in the application. He/She navigates through the menu and reaches the button for creating a new custom sunglasses (Customize). A new screen loads up and prompts the user to select at least at least one frame and lens type for the glasses. When the user is satisfied with his/her sunglasses, he/she will continue to payment method. After that he/she will fill the required information for shipping and finish the order.		
Assumptions: 001		
Line	System Actor Action	System Response
1	The user wants to log in the application.	The system asks the user for identification.
2	The user identifies themselves to the system.	The system returns the user to the home screen.
3	The user navigates through the menu and selects the button Customize.	The system loads up a new screen and prompts the user to select at least at least one frame and lens type for the glasses.
4	The user finish order.	The system returns the user to the home page.
Post Condition:	The system save order in the database.	
Alternate Flow (AFx): 0001 Failed login in the application		

If at line 2 in Create Custom Workout the user fails to correctly identify themselves, the system will prompt the user to either reset their password or give them an option to create a new account.

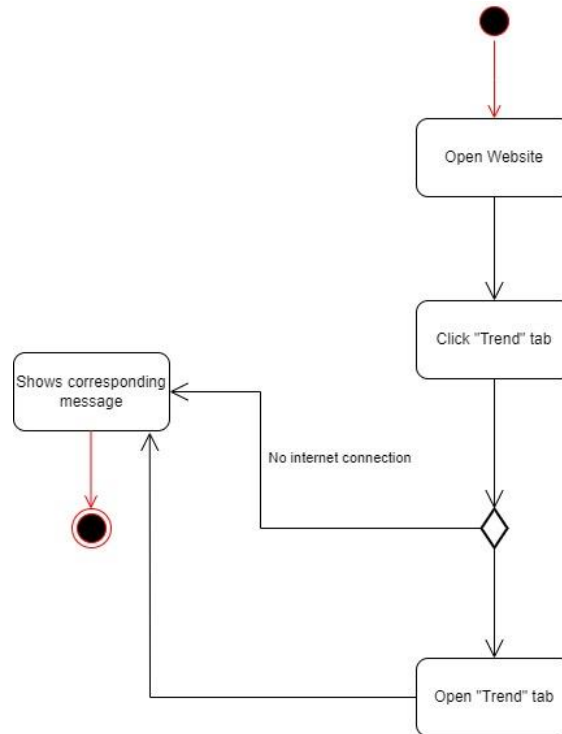
Line	System Actor Action	System Response
1	The user fails to correctly identify themselves.	The system will prompt the user to either reset their password or give
The use case terminates / The use case restarts at line 1 in Customize.		
Post Condition:	The system returns the user to the login page	



Activity diagram 1

5.2 Use Case: Open “Trend” tab

Brief	The user will open Trend menu.	
Description:		
Business	The business event is the user’s desire to open trends.	
Trigger:		
Preconditions:	None.	
Basic Flow:		
The user successfully open the website. He/She navigates through the menu and reaches the button for open Trend.		
Assumptions: 002		
Line	System Actor Action	System Response
1	The user navigates through the menu and selects the button Trend.	The system loads up a new screen and shows the trends in sunglasses.
Post Condition:	None.	
Alternate Flow (AFx): 0002 Failed to open Trends		
If the user’s network connection stops when he/she open the Trends men, he/she will receive a message. It’s necessary the application to show dialog with message “No internet connection”.		
Line	System Actor Action	System Response
1	The user’s network connection stops	Website show dialog with message “Please, check your internet connection”.
The use case terminates / The use case restarts at line 1 in basic flow.		
Post Condition:	0002 The user will receive a message to check his/her internet connection and the app returns to the workouts page.	



Activity diagram 2

6. Other Nonfunctional Requirements

6.1 *Performance Requirements*

The load of the initial screen should take around 2 seconds. The user data(caches, etc.) increases and the application should be capable of handling them without delay.

6.2 *Security and safety Requirements*

User data will be encrypted with RSA algorithm and saves in database. Also, he/she can use 2FA for logging in website.

6.3 *Software Quality Attributes*

We must prioritize the versatility, adaptability, and accessibility of our company's codebase. It's essential to maintain a framework that is easily transferable, readily modifiable, and receptive to enhancements and fixes. Additionally, we must emphasize key attributes such as reusability, dependability, verifiability, and user-friendliness.