

Software Requirement Specification (SRS)

for

Online Shopping "PRODUCT STORE"

<https://www.demoblaze.com>

Version 1.0

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1. Introduction

This Software Requirements Specification (SRS) provides an overview of the entire "PRODUCT STORE" online store SRS with the purpose, scope, definitions, abbreviations, references, and an overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight into the company's "PRODUCT STORE" software system by defining the problem statement in detail. Nevertheless, it also concentrates on the services required by stakeholders and their needs while defining high-level product features. The detailed requirements of the company "PRODUCT STORE" are provided in this document.

1.1 Purpose

This document aims to outline the features of the "PRODUCT STORE" online (product) store to serve as a guide for developers, on the one hand, and a document for testing software for potential customers, on the other. This online store is designed to create a highly profitable enterprise, provide stable sales revenue, satisfy the market of goods through the Internet, provide a market for new brands and increase customer satisfaction. Therefore, this SRS document is a detailed overview of the software product, its parameters, and its goals.

1.2 Scope

"PRODUCT STORE" online store is designed to provide services to customers and meet their needs, who are going to visit and buy goods online instead of visiting the store physically.

1.3 Definitions

Using the site, the user can view items in the catalog, search for products or services, view their description, add favorites to the cart and send feedback or ask the questions.

1.3.1 Terms

Service – The term used for the online shop "PRODUCT STORE";

User – The term used for PRODUCT STORE customers and random site users.

1.3.2 Abbreviations

BMP – used to describe requirements for the body of the main page.

NBR – used to describe requirements for the navigation bar.

FFR – used to describe functional requirements for the footer.

CTR – used to describe requirements for the catalog.

SUM - used to describe requirements for the Sign Up module.

LIM - used to describe requirements for the Log In module.

SRS – Software Requirements Specification.

1.4 Intended Audience

The target audience of the "PRODUCT STORE" online store is:

- people, who want to buy new devices (phones, laptops, monitors);
- companies who want to buy new devices for their businesses (phones, laptops, monitors);
- target market USA.

1.5 References

Service's website: <https://www.demoblaze.com>

2. Overall Description

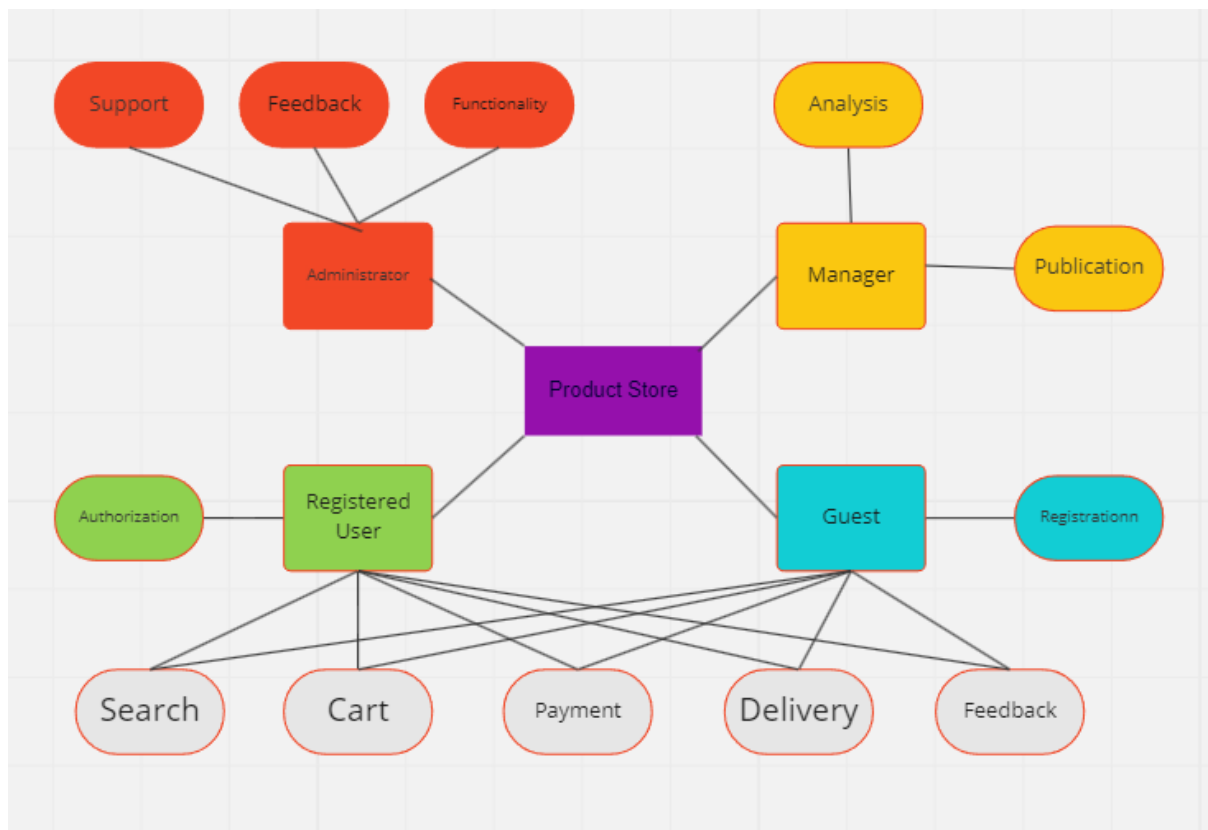
2.1 Product Perspective

"PRODUCT STORE" is an online store where various devices (phones, laptops, monitors) can be ordered.

2.2 Product Functions

The main function of this site is:

- to give the user the opportunity to view products in the catalog;
- to search for products;
- to view their description;
- to add favorites to the cart;
- to pay for the product and be able to order delivery;
- to send feedback or questions.



2.3 User Types

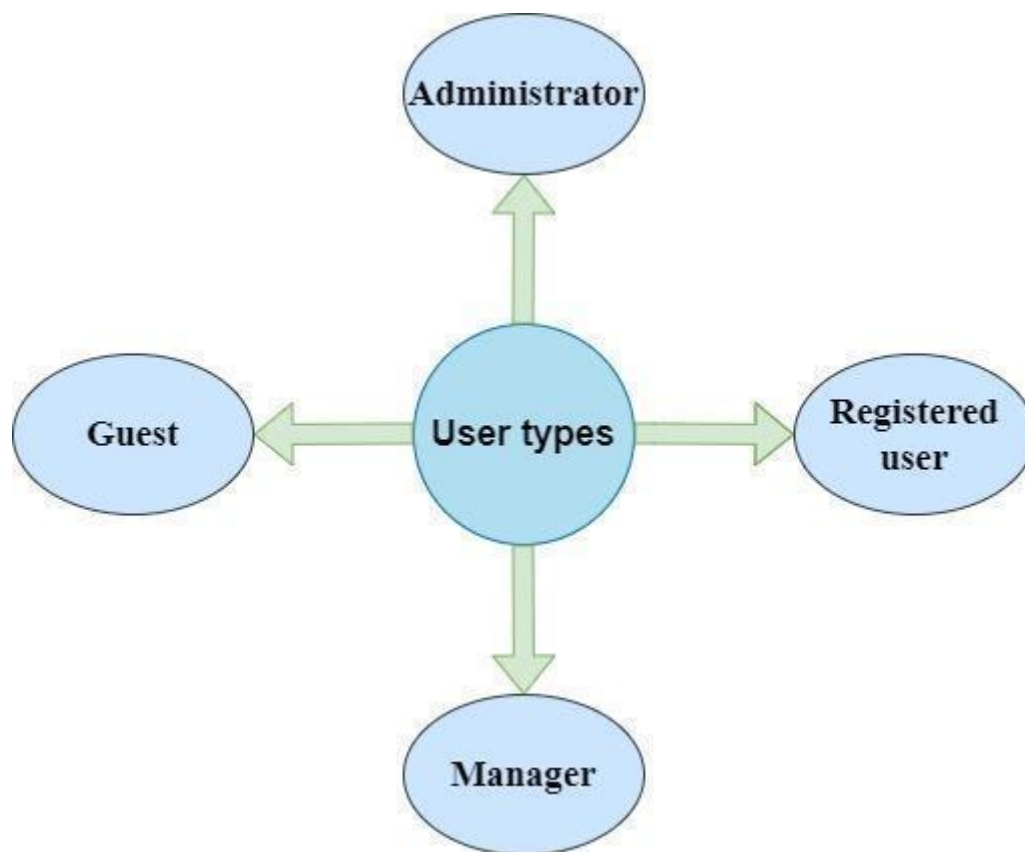
This site provides four types of users:

Guest – not a logged-in user who first comes to the site and gets acquainted with the site and its functionality. Guests can register on the site, choose the product in the basket, place an order, pay for the product, order delivery, and order feedback.

Registered user – a registered user, on whom the product is primarily focused, and is looking for a product. He can choose the product in the basket, place an order, pay for the product, order delivery, and order feedback.

Manager – is a specialist who creates publications, writes texts, selects media files, updates, and analyzes content.

Administrator – registered user with the highest level of access to the administrative panel of the site. Responsible for the direct operation of the service.



2.4 Operating Environment

The preferable browsers and operating systems for the "PRODUCT STORE" online store are Google Chrome, Firefox, Opera and Safari for Windows 7/8/10, Linux, macOS.

2.5 Design and implementation conditions

The entire structure and code of the site must be written according to world standards such as W3C, ISO, and Ecma.

2.6 Business requirements (high-level)

2.6.1. The system should be able to give the opportunity to the users to choose and buy goods (devices) online without visiting an offline store.

2.6.2. The system should be able to give the opportunity to the users to search for products on the site, read the products' descriptions, and see their images.

2.6.3. The system should allow the user to filter products by category.

2.6.4. The system should allow the user to add selected products to the cart and remove them from the cart.

2.6.5. The system should allow the user to create an account and log in to the site.

2.6.6. The system should be able to give an opportunity to the user to order feedback, and to find out information about the company and contact details.

2.6.7. The system should give the user the possibility to get to the needed product in no more than three clicks from the main page of the site.

2.6.8. The system should allow the user to access the site 24 hours a day, 7 days a week.

2.6.9. The system should be accessible from different devices (web interface and mobile devices).

2.7 Assumptions and dependencies

2.7.1. The payment transaction is an external function. The delivery and quality of the service depends on the third-party LiqPay operator.

2.7.2. The system will be tested on the latest versions of Google Chrome, Firefox, Opera and Safari browsers at the time of development. Serious changes made by browser developers may affect the stability of the system.

3. Requirements for the external interface

3.1 User interfaces

3.1.1. The system should provide fast and uninterrupted access to all web pages of the resource.

3.1.2. The system must provide a digital image of each store on the map.

3.1.3. The system should display the exact address of the store.

3.1.4. The system should provide filtering of goods.

3.1.5. The system should provide the registered user with a personal account for the purchase transaction and the ability to compare selected products.

3.1.6. The system must provide security to the user.

Basic modules

Module name	Users	Module description
1. Sign in / Log in	Guest	The user has the opportunity to register for further use of the service. This is done by filling in the appropriate fields of the sign-in form. An already registered user can log in.
2. Log in / Log out	Registered user	An already registered user can log in and log out on the site.
3. Cart	Guest Registered user	After selecting the product, the user has the opportunity to see the selected product and the ability to delete the product from the cart. This module provides the ability to place orders.
4. About us	Guest Registered user Manager	The field of information about the project, its idea, preconditions, main goals, for whom this project is, the problem that this project solves, etc.
5. Categories	Guest Logged-in user	This module gives an opportunity to choose the category of product
6. Carousel bar	Guest Registered user Manager Administrator	This module works as an advertisement and shows the most popular or the newest products on the site.
7. Feedback	Guest Registered user Administrator	The plugin for communication with the site administration is through a form that the user must fill out. Appears on all pages of the website.

3. External Interface Requirements

3.1 User Interfaces

The user interface for the software shall be compatible with browsers Google Chrome, Firefox, Opera and Safari by which the user can access the system. The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, EJB, etc.

3.1.1. The system should provide uninterrupted access to all web pages of the resource.

3.1.2. The system must be available from any device (smartphone, laptop, tablet).

3.1.3. The system must be accessible to the user from browsers Google Chrome, Firefox, Opera and Safari.

3.1.4. The system should have a division of goods by category.

3.1.5. The system should provide the user with the opportunity to make a purchase.

3.1.6. The system must provide a digital image of each product.

3.2 Software interfaces

3.2.1. Operating System: Windows 7/8/10 which supports networking. JAVA development toolkit.

3.2.2. The system must interact with the LiqPay system to determine available payment methods, confirm payments, and process payments.

3.2.3. The system must interact with the sales system to manage orders.

3.3 Hardware Interfaces

The System must run over the internet, all the hardware shall require to connect to the internet will be a hardware interface for the system. For e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

3.4 Communication Interfaces

The two parties should be connected by LAN or WAN for communication purposes.

4. Features

4.1 User registration and login

4.1.1 Description and priority

The user has the opportunity to register as a new user or log in to his personal account .

Priority: High

4.1.2 Functional requirements

SUM-4.1.1 The system must provide the user with the opportunity to sign up, and enter personal data in the specified format.

LIN-4.1.2. The system must provide the user with the opportunity to log in, entering personal data in the specified format.

LIN-4.1.3. The system should allow the logged-in user to save the user's name and password.

LIN-4.1.4. The system should allow the logged-in user to leave his personal account.

4.1-1 "Sign Up" Module (SUM)

4.1-1.1 Description and priority

User should be able to create an account in the system.

Priority: High

4.1-1.2 Functional requirements

SUM 1. Inputs

SUM 1.1 Input form "Username"

User should be able to input username.

Valid values: lower and upper Latin letters, numbers, symbols.

Invalid values: non-Latin letters, not filled form.

Characters minimum number: 4

Characters maximum number: 50

Display: The entered characters are displayed

SUM 1.2 Input form "Password"

User should be able to input password.

Valid values: lower and upper Latin letters, numbers, symbols.

Invalid values: non-Latin letters, not filled form.

Mandatory values: at least one character of valid values.

Characters minimum number: 8

Characters maximum number: 256

Display: the entered characters are replaced by the character "."

SUM 2. Operation

SUM 2.1 "Sign Up" module opening

The module should be opened by clicking the "Sign Up" tag on the Navbar navigation panel.

SUM 2.2 "Sign Up" module closing

The module should be closed by clicking the "Close" or the "✕" button.

SUM 2.3 User registration

The user account should be created by clicking the "Sign Up" button.

SUM 3. Outputs

SUM 3.1 "Sign Up" button activation

The "Sign Up" button should be activated after filling all input forms with valid data.

Module forms are not filled out. The "Sign Up" button is not activated. After filling all forms of the module with valid data, the "Sign Up" button is activated.

SUM 3.2 Forms are filled with valid inputs

User account should be created by valid input forms filling and clicking the "Sign Up" button.

After clicking the "Sign Up" button, a pop-up window "www.demoblaze.com says" with the inscription "Sign up successful" appears on top of the module. The window has an "OK" button. After clicking the "OK" button, the "www.demoblaze.com says" window and the "Sign Up" module disappear from the screen. User data is recorded to the system database.

SUM 3.3 Forms are filled with invalid inputs

Error by invalid input forms filling.

After clicking with the cursor outside the form, the frame of the form changes color to red. Below the form appears the error message "Error filling <form name>" and the reason for the error according to the restrictions described in SUM 1.1 and SUM 1.2. The "Sign Up" button is not activated.

4.1-2 "Log in" Module (LIM)

4.1-2.1 Description and priority

Users should be able to login in the system.

Priority: High

4.1-2.2 Functional requirements

LIM 1. Inputs

LIM 1.1 Input form "Username"

User should be able to input username.

Valid values: lower and upper Latin letters, numbers, symbols.

Invalid values: non-Latin letters, not filled form.

Characters minimum number: 4

Characters maximum number: 50

Display: The entered characters are displayed

LIM 1.2 Input form "Password"

User should be able to input password.

Valid values: lower and upper Latin letters, numbers, symbols.

Invalid values: non-Latin letters, not filled form.

Mandatory values: at least one character of valid values.

Characters minimum number: 8

Characters maximum number: 256

Display: the entered characters are replaced by the character "."

LIM 2. Operation

LIM 2.1 "Log in" module opening

The module should be activated by clicking the "Log in" tag on the Navbar navigation panel.

LIM 2.2 "Log in" module closing

The module should be closed by clicking the "Close" or the "✕" button.

LIM 2.3 User login

User should be login in the system by clicking the "Log in" button

LIM 3. Outputs

LIM 3.1 "Log in" button activation

The "Log in" button should be activated after filling all input forms with valid data.

Module forms are not filled out. The "Log in" button is not activated. After filling all forms of the module with valid data, the "Log in" button is activated.

LIM 3.2 Forms are filled with valid inputs

User should be login in the system by valid input forms filling and clicking "Log in" button

After clicking the "Log in" button, the "Log in" module disappears from the screen. In the Navbar navigation bar:

- tag "Log in" is changed to tag "Log out"
- tag "Sign in" is changed to tag "Welcome <username>"

The user is logged into the system.

LIM 3.3 Forms are filled with invalid inputs

User should not be login in the system by invalid input forms filling

After clicking with the cursor outside the form, the frame of the form changes color to red. Below the form appears the error message "Error filling <form name>" and the reason for the error according to the restrictions described in LIM 1.1 and LIM 1.2. The "Log in" button is not activated.

4.2 Contact and company information

4.2.1 Description and priority

The user should be able to view the contacts, and company information

Priority: High

4.2.2 Functional requirements:

FFR-4.2.1. The system must allow the user to have access to the phone number, address, and email of the company.

NBR-4.2.2. The system must provide the user an opportunity to contact the company via the message form.

NBR-4.2.3. The system must provide the user with an opportunity to read information about the company.

NBR-4.2.4. The system should provide the user an opportunity to view the video information about the company.

4.3 Choice of product or services

4.3.1 Description and priority

Users should be able to view and choose a product or service from the catalog on the site.

Priority: High**4.3.2 Functional requirements:**

CTR-4.3.1. The system must display the catalog categories.

CTR-4.3.2. The system should provide the user access to the catalog category "Phone".

CTR-4.3.3. The system should provide the user access to the catalog category "Laptops".

CTR-4.3.4. The system should provide the user access to the catalog category "Monitors".

CTR-4.3.5. The system should display short information about the product under the product name and image on the home page.

CTR-4.3.7. The system must allow the user to add chosen products to the cart on the page of the product.

CTR-4.3.8. The system should display in the cart chosen product information such as: "Picture", "Title", and "Price".

CTR-4.3.9. The system must allow the user to remove chosen products from the cart.

CTR-4.3.10. The system should display the list of products offered by the company.

NBR-4.3.11. The system should redirect the user to the Cart page while clicking to the button "Cart" on the navigation bar.

CTR-4.3.12. The system must provide information about the products on the home page: title, photo, price, and product description.

CTR-4.3.13. The system should allow the user to pay for goods online.

NBR-4.3.14. The system must provide the user an opportunity to return to the home page in one click by the "home" button or "Logo button".

CTR-4.3.15. The system should provide the user an opportunity to go back to the previous page in the catalog module if such is available

CTR-4.3.16. The system should provide the user an opportunity to go to the next page in the catalog module.

BMP-4.3.17. The user must be able to remove the item from the cart.

CTR-4.3.18. The user must be able to view the image of the available product.

4.4 Navigation bar

4.4.1 Description and priority

The user must have access to the functions of the navigation bar (cart, the home page, information about us, log in/log out, sign up, carousel bar).

Priority: High

4.4.2 Functional requirements:

NBR-4.4.2.1. The system should provide access to information about us.

NBR-4.4.2.2. The system must provide access to the cart.

NBR-4.4.2.3. The system must allow the user to use the home button for redirection to the home page.

NBR-4.4.2.4. The system must allow the user to use the feedback field and send a message.

NBR-4.4.2.5. The system must allow the user to log in.

NBR-4.4.2.6. The system must allow the user to log out.

NBR-4.4.2.7. The user must be able to view the image of the available product in the carousel bar.

4.5 Information for users on the body of the main page

4.5.1 Description and priority

The user must have access to the goods catalog and categories of goods to choose from.

Priority: High

4.5.2 Functional requirements:

BMP-4.5.2.1. The user must be able to see the sections of the catalog.

BMP-4.5.2.2. The customer must be able to see the images of the goods.

BMP-4.5.2.3. The user must be able to move to the next page if it exists.

BMP-4.5.2.4. The user must be able to move to the previous page if it exists.

BMP-4.5.2.5. The user must be able to move to the page with a full product description by clicking on the name of the product.

BMP-4.5.2.6. The user must be able to see a short description of the products on the main page.

5. Non-functional requirements

5.1 Performance requirements

This subsection specifies both the static and the dynamic numerical requirements placed on the software or on human interaction with the software

5.1.1. 95% of group operations should be processed within no more than 3 seconds

5.1.2. The product shall be web-based and has to be run from a web server.

5.1.3. The loading of the site also depends on the end-user Internet connection

5.1.4. The software must support 100 customers at the same time

5.2 Protection requirements

5.2.1 System use shall not cause any harm to human users

5.3 Security requirements

5.3.1. The system should be able to protect the privacy of user data.

5.3.2 Workspace of the user should only be accessed through the user's own credentials and any other user should not be able to access the user's private data.

5.3.3 User should only access his own workspace. Also, the rights of the user should be restricted so that user can not harm to system by the programs they run or by the commands they run on

5.3.4 Since all the data will be transferred on the web, the system should also use encryption and decryption mechanism, in which only the intended user can decode the data and work on the data.

5.3.5. The user must log in to the system to perform transactions

5.3.6 The system should allow only site administrators to make changes to the site

5.3.7 The system should allow you to view only your own information, not the information of other users

5.3.8 The system must use the HTTPS web protocol to securely connect to the server.

5.3.9 The user must enter the correct login and password to log in

5.3.10 The system should not leave any cookies on the customer's computer containing the user's password.

5.3.11 The system must automatically log out all customers after a period of inactivity.

5.4 Software System Attributes

There are a number of attributes of software that can serve as requirements. It is important that required attributes are specified so that their achievement can be objectively verified. The following items provide a partial list of examples. These are also known as non-functional requirements or quality attributes.

5.4.1 Reliability

Website. Must give consistently correct results.

Product reliability is measured in terms of project performance in different working environments and different conditions. It is assumed that the platform serves 100 users at a time and nothing falls.

5.4.2 Usability

This can be measured in terms of ease of use. The application should be user-friendly. It's easy to learn. Navigation should be easy

5.4.3. Quick reaction

A good system requires a quick response. Users will leave the web page if the response time is too long. Therefore, we try to perform all operations within 3 seconds.

5.4.4 Correctness

The application must be correct in terms of its functionality, internal calculations, and navigation. This means that the program must meet the functional requirements.

For example, when users view information about a specific product, the information

should be read from the database and displayed correctly on the interface.

5.4.5 Probation

The system should be easy to test and detect defects. If necessary, it should be easy to divide it into different modules for testing.