Software Requirement Specification Document for CSE334 Course Project

Saleh Ahmed , Youssef Mohammed , Zeynat haytham ,Arwa faisal ,Shahd Ashraf
Supervised by: Dr. Essam Eliwa, Eng. Omar Abdelwahab

April 18, 2023

Table 1: Document version history

Version	Date	Reason for Change
1.0	18-Feb-2023	SRS First version's specifications are defined.
1.1	14-APR-2023	Update in the "Problem Statement" Update in the "User Characteristics"
1.2	16-APR-2023	Update in the "Design Constraints" Update in the "Operational Scenarios"

Project: GitHub repository

Contents

Abstract

Pmico el captain is a company that is specified in importing and exporting production requirements such as cutting tools that is required for producing any product in any factory on CNC machine and laser cutter.They are specified in 5 types of cutting tools which are end mills, ball noses, tool holders, carbide burrs, carbide inserts. The company isn't satisfied by their distribution on factories only but they also sell to the small workshops and traders in El Gomhouria street which is the most famous street for tools trading in Egypt.

1 Introduction

1.1 Purpose of this document

The purpose of this SRS document is to specify the requirements of the client, the basis of the online store, the functional and non-functional requirements. This document is intended to our supervisors: Dr. Essam Eliwa, Eng. Omar. This online store is made for everyone who wants to see the latest product or all the product of the store and order it on the internet without the need to go to the store's branch.

1.2 Scope of this document

The required functions are:

- Client needs online store to display all of his products to customers.

- The availability of product search by the customer.

- The logo should appear in every page.

- Add to cart.

- Payment by different ways (cash on delivery , visa/mastercard and fawry).

- The option of delivery and pick-up.

- Admin page to facilitate the adding and deleting of products or services.

- All products sales and display the revenue.

- Displaying the sizes of the products to prevent wrong purchases.

- Home page displaying the new products , the offers, about us , contact us and location.

Guidelines for applying the functional and non-functional requirements:

- All the products will be displayed in the product page.

- The product page will have a feature that the user to search for a specific product.

- The Logo of pmico store should appear on the nav bar in each webpage.

- A cart feature that enable the user to choose more than one product and pay at the end.

- When the user reach for the last step which is the payment, he will have the option to pay cash on delivery or Visa/mastercard or Fawry.

- The user can choose to pickup his shipment instead of delivering it.

- The client will have his own interface webages "Admin Webpages" that allows him to add and delete products and other things to control the website.

- The website will get a web page that displays his sales and revenue with every product that get sold.

- As the store is selling workshops equipment and tools, every tool has multiple sizes, so each tool will be displayed only one time and will have a list of its diffrent sizes.

- The Home page of the website will display the latest products, offers, about us , contact us and location.

The final deliverables are:

- Online store website.

- Software Requirements Specification (SRS).

- Testing Document.

- Software Design Document (SDD).

The involved stakeholders:

- The client who is a business man.

- The client's employees.

- Their clients that will use the website to buy the product.

Guideline for the project schedule:
We started working on this project 8 weeks ago and finished the proposal document, 90% of the frontend, 20% of the SRS document and 20% of the backend. We are planning to finish the implementation in the next 3 weeks to start testing.

2 Similar Systems

2.1 Academic

1.Medusa Company's main products are cosmetics, and it has 6 sub-companies. However, the company seems to have some difficulty in satisfying consumers' individual demand. Traditional sale mode and speed can no longer match the whole market's demand. so the researchers tried to find other sale approach for the company. As to development of the e-business website, there are

three main tools, ASP, PHP and JSP. But compared to ASP and PHP, JSP is better from aspects of characteristics, database linking, application range and future development JSP will get more and more popularity especially in establishing e-business websites. Therefore, the researchers in design this sale system applied JSP as developing tool, along with SQL Server as background database management system. The researchers designed a system to organize the process of logging in the site and purchasing the order and methods of payment as shown in the following diagram[2]:
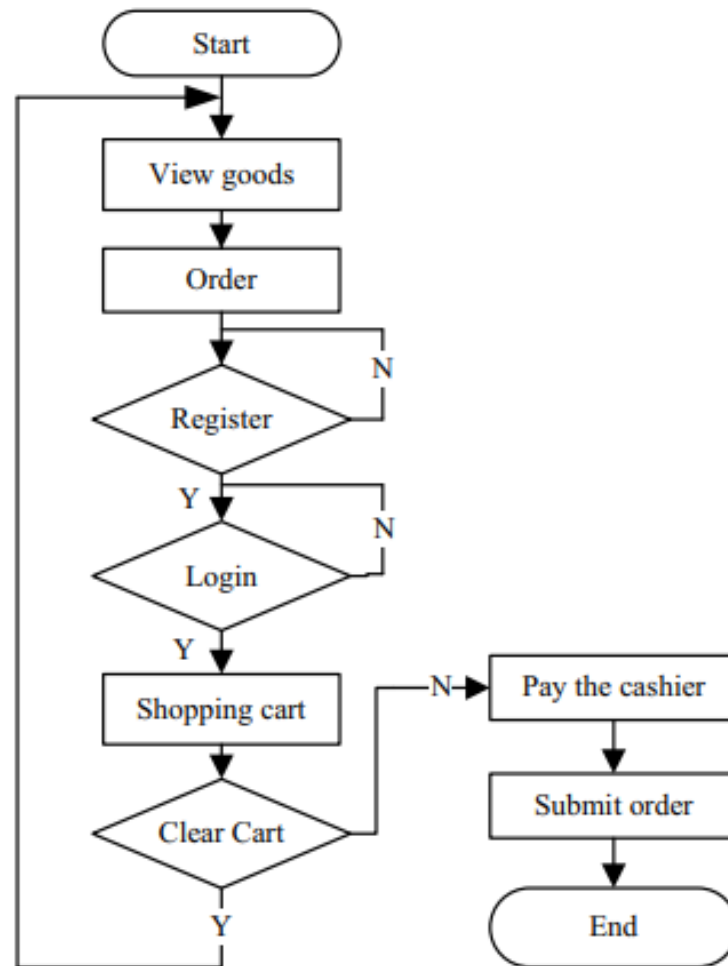

Figure 1: system diagrams

The system has stable function. It is an application of B/S structure through which consumers can order goods conveniently In addition, consumers' various demand has been considered when this system is designed, for example unique packages are provided for individuals. Moreover, consumers can also score the goods and comment on service on this website.

2.2 Business Applications

Machine seeker is one of the available applications in the market, it sells machinery products and tools like milling machine..etc.
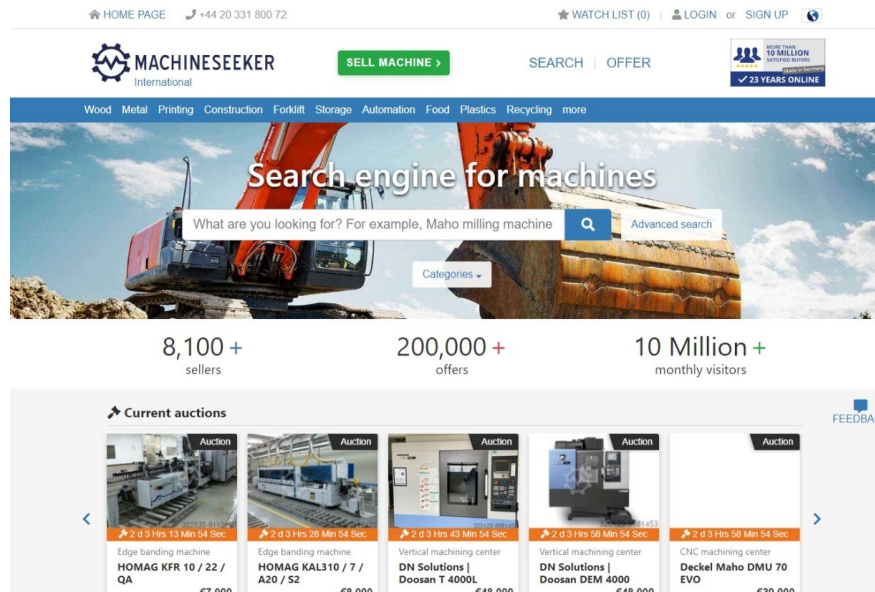
Figure 2: Business Application

3 System Description

3.1 Problem Statement

- Due to the high demand on the products offered by the client. In which, his products is purchased all over the country ,not only in the city of origin, It became necessary to offer an easier way to all his customers to view, inspect and purchase his products with just few clicks Without having to deal directly to selling place and the inventories.

- When dealing with such small products and every product has its name,code,and function , it's likely that a lot of problems will appear such as the number of products received from suppliers and sold are not the same , keeping track of the inventory and the shortage in some of the products.

- A major deficiency facing the client is keeping an eye on the amount of users and purchasers in a time needed, so the client can know is he growing in his business, losing or standing still.

3.2 System Overview

By opening the website immediately it requires you to login or to sign up if the user doesn't already has an account .There are only two categories of potential users . first type of user is the admin, the admin after signing up will have a dashboard that will allow him to edit in products , Add a product , delete a product , and track the inventory , the visits, and purchases done on the site . The second type of user is the normal user , the normal user after signing up will a homepage with the contact Information in it and menu that can direct him easily to The product page that is divided

into multiple categories of products. The user can choose the needed products and add them to the cart and proceed to checkout . As shown in figure 2 .
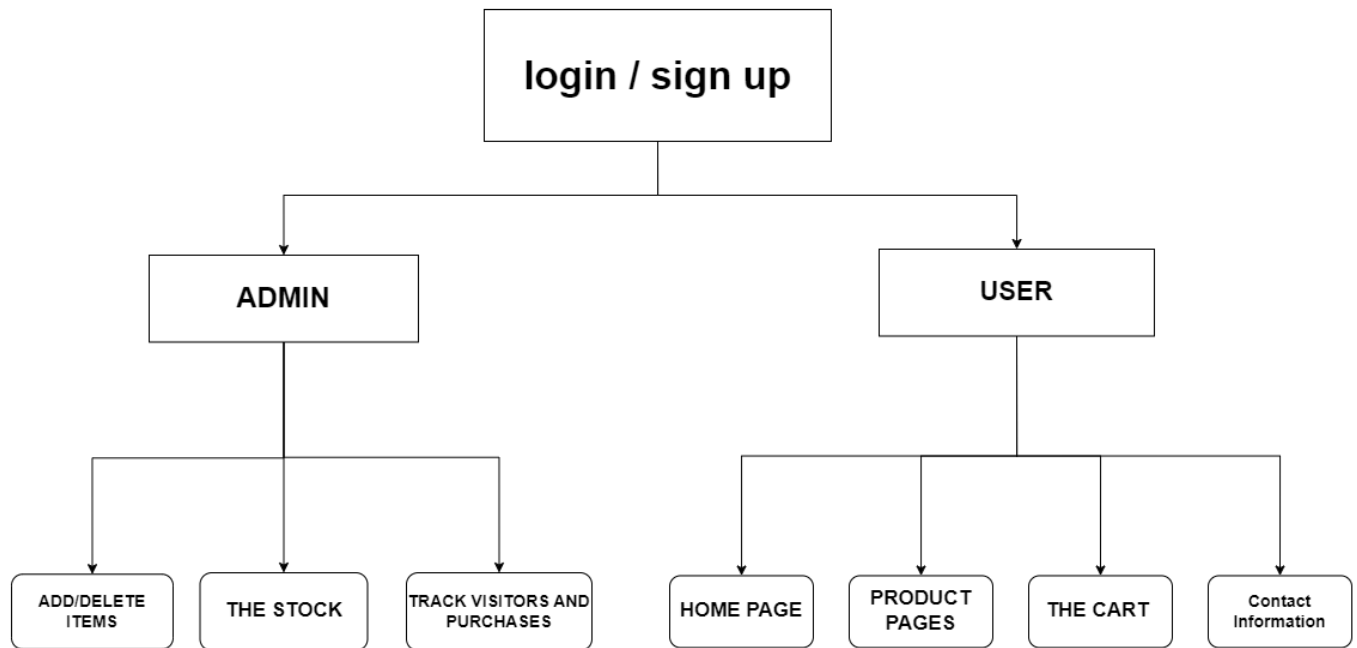

Figure 3: users diagrams

3.3 System Scope

Pmico Online Store will provide :

- Easy interface to search for desired products

- Will provide the user with contact information from the first glance at the site

- An organized interface that shows the user all the products offered

- An e-commerce service

- The admin will be able to add/delete , change prices , know the sales of all the products

- Keep Track of all visits to the site and purchases done .

3.4 System Context

Figure 4: System context

3.5 Objectives

Pmico Online Store provides an easy interface to any user all over the country to Find Products for his factory or workshop in just few clicks . This web application will have a navigation bar that will allow users to select from the different Product categories Provided. E-commerce service That will help users pay at any time and in just few minutes. The website will also work as a marketing tool to improve the store name popularity .

3.6 User Characteristics

There are only two types of users in the system Admin user , Normal User

Admin user, will have authorities that will not be available to The normal user, such as, add/delete , change prices , Track the visitors that used the site , and to manage the stock .As well as the same pages available to the Normal User.

Normal user , will have the ability to smoothly browse through all the pages including homepage , product pages, The cart , know the contact information and learn more about the store , and purchasing online any item he selected.

4   Functional Requirements

4.1   System Functions

- The admin shall be able to update the available products and their prices.

- The admin shall view clients' order history.

- The client shall be able to view product and its full details including price, availability in the market and description.

- The client shall choose the payment method.

- The client shall add products to the cart.

- The client shall login/register to reserve a product.

- The system shall analyze the company's sales per month.

- The system shall allow the client to add products to cart and reserve them to buy at the store later

- The system shall allow the client to search for specific product in the search bar.

- The system shall allow the client to rate the product and give comment during and after the purchase process.

- The system shall allow communication between the client and the admin through message box.

5   Design Constraints

The users who can log in the website must be not less than 18 years old. The colors of the websites are bright and vibrant to attract the users they are yellow and orange and the font is simple and clear for all users to read

5.1   Standards Compliance

The programming languages that were used are python with framework django, html, css and JavaScript.

5.2   Hardware Limitations

The software will be applicable through many devices such as mobiles,computers and tablets.

6 Non-functional Requirements

6.1 performance and scalability

Performance and scalability are the two core non-functional requirements no system can do without.
- The system has to deal with the measure of system response time under different load conditions by supporting around 5000 users per hour with 6 seconds or less response time in a browser.
- The system assesses the highest workloads under which it still meet the performance requirements.
- It is scalable enough to support 500000 visits at the same time while maintaining optimal performance.

6.2 portability

The application should be compatible with various web browsers, operating systems,devices and could be launched within one environment or another.
- The system is compatible with the latest versions of major web browsers, such as Firefox, Opera, Chrome, Edge, and Safari.
-Also it could run on windows 10 or 11 without any change in its behaviour and performance.

6.3 security

- The system requires users to create accounts to access applications to store information and display profiles.
-The system grants access to accounts when users enter the correct username and password which they created themselves.
- The user have to create a strong password for their account including uppercase letters,characters,and numbers.
- The system use password hashing to store user passwords.
- After a certain number of login attempts, a security system may lock an account to protect a user's information like (credit card number and history of orders) from any fake attempts.

6.4 Availability

the system is accessible for user at a given point in time.
- Users can access the system 99 percent of the time without failure everyday even weekends except for the maintenance time.
- System maintenance should be scheduled over the weekends and announced.
-Any scheduled system maintenance should not take more than three hours.

7 Operational Scenarios

What is expected:user creates an account according to the required steps,he chooses the category they want from home page ,scroll and shop what they desired and he add to cart whatever they want to buy .after finishing shopping he asked to pick payment method,fill all the needed information for the shipping and a message with the total price , time for the order to arrive and track order until it delivers.

What obstacles could happen: user could enter a repeated mail if he once used so he could login withe the old account or create a new one with different email. user could forget password but if he presses forget password an code could be sent to the saved phone number of this account and would be able to return back their account. If the user while shopping lost the item they want the could choose its category and adjust the price of it to find it easily and quickly again. If they ordered something wrong including color or size for example they could inform us by the number that will be available on the website.
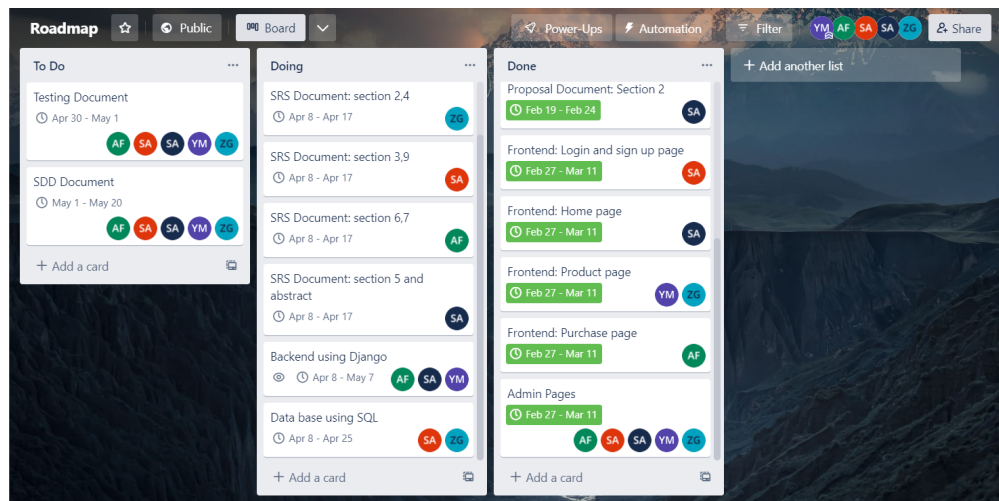
8 Project Plan

Figure 5: Project time plan

9 Appendices

9.1 Definitions, Acronyms, Abbreviations

E-commerce:Is a method of buying and selling goods and services online .
JSP :Java Server Pages .
ASP :Active Server Pages.

9.2   References

[1] freeprojects. URL:https://www.freeprojectz.com/dfd/online-shopping-system-dataflow-diagram

[2] Yixiu Yu and Sisheng Liang, "Sale system analysis and design for the online cosmetic store based on JSP," 2011 IEEE 2nd International Conference on Software Engineering and Service Science, Beijing, China, 2011, pp. 438-441

[3] uxdesign. URL:https://uxdesign.cc/non-functional-performance-requirements-for-ecommerce-websites-79c10853843a

[4]URL:www.machineseeker.com MachineSeeker International leading online network for used machines and commercial vehicles in Europe. [Accessed on April 10th, 2023].