**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Author(s) | Changes | Version |
| 12/04/2021 | Özgün Şen  Berfu Anıl  Esra Ateş  Nehir Erdem | Initial Draft | v1.0 |

Stock Management System

System-Wide Requirements Specification

# Introduction

This Software-Wide Requirements Specification document is prepared for the Stock Management System. This document defines the system's constraints and non-functional requirements which applies to the whole system. This is the initial draft and it will be used for the extensions.

# System-Wide Functional Requirements

## User Management

### **Sign Up The System**

The system shall allow the user to sign up for the system.

### **Login The system**

The system shall allow the user to log in to the system.

### **Manage User Roles**

The system shall allow the user to manage the user roles.

## Material Management

### **Manage Raw Material**

The system shall allow the user to manage raw materials and define their stock level thresholds.

* + 1. ***Manage Product***

The system shall allow the user to manage products.

### **Manage Inventory Bindings**

The system shall allow the user to map products with the raw materials to define the bill of material of the product.

## Inventory Management

* + 1. **Manage Stock Requests**

The system shall allow the user to manage stock requests.

### **Manage Stock Levels**

The system shall allow the user to manage stock levels manually.

The system shall reduce the stock levels based on production.

### **Receive Alerts for Stock Levels**

The system shall compare the current stock levels with the specified stock thresholds.

The system receives alerts for stock levels.

### **Generate Inventory Status Notifications**

The system shall notify the user about inventory status via email on a daily basis.

### **Generate Inventory Reports**

The system shall allow the user to generate the inventory reports.

### **Manage Stock Forecasting**

The system shall allow the user to manage stock forecasting.

The system shall calculate the required stock numbers of the raw materials based on the forecasting.

# System Qualities

## Usability

The interface must be resizable for all devices such as mobile, tablets etc.

The interface must show the user experience design principles such as eye-friendly texts, colours, element patterns to ease the use of it for people of all ages.

## Reliability

Users cannot have more than one active session simultaneously.

The system should be up and running 24 hours operation period.

Wrong entries made by the user will be handled and will not interrupt the system.

## Performance

The system will react to user commands as fast as possible.

## Supportability

In terms of understandability, the code will be commented on for further uses.

# System Interfaces

## User Interfaces

The system will interact with the users through an easy to use web interface. This interface will work with the Chrome browser without experiencing any design problems.

### **Look & Feel**

The system will have a look and feel graphical user interface i.e., the colours, icons, layouts and behaviour of the buttons, boxes and menus will be familiar to users which increases ease of use.

### **Layout and Navigation Requirements**

The system will provide a menu (sidebar) for users to navigate different system action screens.

### **Consistency**

User interface elements in the system will be designed uniformly. UI elements used in all screens will look and behave the same way in order to provide a sense of control, familiarity and reliability.

### **User Personalization & Customization Requirements**

The system will not offer any customization options.

## Interfaces to External Systems or Devices

### **Software Interfaces**

The system will perform the payment actions via the payment interface. Also, an SMTP interface for e-mail notifications will be used.

### **Hardware Interfaces**

The system will connect to the Internet and all hardware for Internet connection is required i.e., modem, WLAN-LAN, 3G.

### **Communications Interfaces**

This system requires communication via Hypertext Transfer Protocol (HTTPS).

# Business Rules

## User Account Rules

The user should have a checked-out licence plan in order to be able to sign up to the system.

The user should be signed up to the system before logging in.

The user should log in to the system to access the main screen.

Users should be able to access the stock levels all the time.

## Inventory Update Rules

Only the registered user can update the system.

One item can be updated at a time.

There should exist raw materials and products in the system in order to manage inventory bindings.

## Payment Rules

Users should be able to perform payment actions on the Stock Management System via valid credit card information.

# System Constraints

Developers must use the same NuGet packages along with libraries in order to maintain consistency. In terms of privacy, the user data will be kept in a cloud-based system with high security. For development, C# will be used in Microsoft Visual Studio 2019 which supports Web-based systems with several NuGet packages along with libraries. The computer for the system development is a Windows OS computer that is suitable for Visual Studio 2019. The web interface can be reachable for Google Chrome.

# System Compliance

## Licensing Requirements

There is a licensing requirement along with a trial period.

## Legal, Copyright, and Other Notices

Copyright will be included.

## Applicable Standards

OpenUP standards will be applied.

# System Documentation

A user manual will be provided for the Stock Management System.