**Inventory Management System**

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1. **Introduction**
   1. **Purpose**

* The purpose of this document is to present a detailed information on the Inventory Management System project.
  1. **Scope**
* This system will be designed to store and manage an inventory where products will be classified in categories. There will be a section of Users, where they will be created by its specific module. The section of Products will hold 10 PCs, 12 monitors, 7 laptops, 15 keyboards and 16 mouses as requested. The section of Categories will consist of 4 categories which will include all the products mentioned above. The option of adding and updating will be available to the administrator role for every section. The user role will have permission to add and update products and categories, while the guest role will have permission to only read about products and categories.
  1. **Glossary**

|  |  |
| --- | --- |
| **Terms** | **Definitions** |
| Database | The collection of all the needed data used by this windows application |
| Admin | The primary role which can access everything related on the project |
| User | The secondary role which has some read and write functions |
| Guest | The role which has some read functions only |
| Form | UI framework for building Windows desktop apps. |
| Log | Report that provides detailed event audit information in a format that minimizes the report's impact on system resources. |
| Drop Down | Appearing below a menu title when it is selected, and remaining until used or dismissed. |

* 1. **Overview of Document**
* The next chapter, the Overall Description section, of this document gives an

overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written

primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software in its entirety, but are intended for different audiences and thus use different language.

**2.0. Overall Description**

**2.1. System Environment**

* Inventory Management System is a Windows Forms Project developed on the .NET Visual Studio Platform, and written on C# programming language. It consists of eight forms, where the Home Form holds the role-based access simulation. The database is configured offline.

**2.2. Functional Requirements Specification**

**-** This section outlines the functions of each role separately.

The administrator role can add users, products, categories, and also edit, delete or update them. In the Home Form there are three buttons that make lists of users, products and categories appear. Three additional buttons are for adding data in each of these sections. Administrator role has access on all of these functions. It can read and write info on all the sections of the project.

The user role cannot access the section of users, therefore cannot read info on the users nor can add new ones. But the user role can add new products, update or delete them. It can also access the categories section where these functions are available there also.

The guest role can only access the users and categories list, which means it can read info on products and categories, but cannot add new ones nor update, delete them.

Every logged in user can logout by the button provided in the Home Form, and that would make the Login Form appear again for a re-login.

**2.3. End-User Characteristics**

**A detailed explanation on every form of the application.**

**2.3.1 Inventory Management System Application**

* An application for managing any inventory, where we can store, add or remove products, categories and users. The application is developed on Microsoft .NET platform and is coded in C # programming language. The project is of the Windows Forms type, so we are dealing with a desktop application. In the following sections are detailed the component forms of the project on which the application is created.

**Home Form**

* The main form of the application which is executed automatically after logging in with the relevant data of a user inserted in the database table. We have all the components of the project and we can access them through this form. In this form, role-based access is possible, divided into three options (administrator, user and guest). Depending on the role we choose, the functions that are allowed to us based on them also change. Furthermore, the role of administrator has no restrictions on the application. Administrator rights are the addition, removal and updating of all components of the project. The role of the user can perform actions on products and categories, but is limited to the part of the user table, where only the administrator has access. If we choose the role of guest, we will have the opportunity only to read data in the table of products and categories. This form also includes the logout button which performs the logout function as a logged in user and restores the Login Form.

**Login Form**

* One of the necessary forms for every application created is the Login Form. We can write the relevant credentials (username and password) and this gives us the opportunity to log in to the system to perform various actions. Also, the opportunity is offered for:

• delete newly inserted credentials via the 'Clear' button

• make the password visible via the 'Show Password' button.

**User Module Form**

- Form for adding new users, as well as updating existing ones. The form displays the appropriate parameters required for each user, such as: user name, full name, password and rewrite, as well as mobile / phone number. The buttons that perform actions in this form are:

• 'Save' for storing data in the table

• ‘Update’ to update an existing user

• 'Clear' for deleting newly inserted credentials

**User Form**

- The form which shows the order of each existing user in the respective table. They are displayed with each respective parameter and here we can manage them through the buttons:

• 'Edit' which offers the possibility of updating

• ‘Delete’ which offers the possibility of deletion

**Product Module Form**

* In this form we can create new products with the right parameters, such as: product name, quantity, price, description and category in which it belongs. The buttons that perform actions in this form are the same as those of the User Module Form, through which we add new products, update existing ones, and delete newly inserted credentials.

**Product Form**

* The form which shows the order of each existing product in the respective table. They are displayed with each respective parameter and here we can manage them through the buttons:

• 'Edit' which offers the possibility of updating

• ‘Delete’ which offers the possibility of deletion

**Category Module Form**

* Similar to the module formats described above, the categories in this application also have a corresponding module. In this form we can create new categories, where it is enough to write only their only parameter which is the name of the category. The buttons that perform actions in this form are the same as those of the above modules.

**Category Form**

* Form for displaying categories with parameters that belong to each. We can manage them through the buttons:

• 'Edit' which offers the possibility of updating

• ‘Delete’ which offers the possibility of deletion

**DB Inventory Log**

* Database is what makes possible the creation and storage of data in relevant tables. The database of this project was created in SQL Management Server, and then connected to the solution. The connection string holds the location of the database, and is included in code lines. In this project we have created three tables:

• Table of users

• Product table

• Table of categories

The following picture shows each transaction performed on this database during the creation of the project:

