CLÜZ

Inventory Management System

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Project Description

The proposed project 'CLÜZ' will manage clothing inventory for a retail store of warehouse distribution environment. CLÜZ will be designed with efficiency and ease of use for the user in mind. This project aims to solve the age-old problem of bland designs and clunky interfaces associated with most data entry software, especially those within the retail environment. CLÜZ's purpose will primarily become a proof of concept that a visually appealing and inherently intuitive GUI can exist in a viable manner. By the end of this project, a real-life demo of a working sample CLÜZ will be achieved.

Different categories such as product name, size, gender, brand, color, price, and quantity will all be filterable. Unique product number will be assigned to the name of each product. CLÜZ will be a secure system requiring users/admins to login before editing any sensitive data. All valuable information will be stored inside CSV files and managed via arrays through the Java programming language.

Problem Definition

Currently, the retail market is overabundance by bland and outdated software for data entry at the retail level. Yet inventory management, whether manually or electronically is so critical for the survival and success of any business. CLÜZ was proposed to solve that issue by implementing a current interpretation of how a database entry system can look and operate in 2019. The aim is to not only create efficient data storage but also to inspire creativity from a normally mundane task. No longer will workers have to navigate through impossibly cryptic navigation tools or spend valuable time trying to find the correct item.

Objectives

The inventory management system will be intended for retail and warehouse employees or anyone that requires a new software for data entry for clothing. Important functions such as "Adding Item", "Editing Item", "Remove Item" are key functions to be included in its implementation. CLÜZ will intend to increase the quality of life and worker productivity by introducing a simple to use and aesthetically pleasing GUI. CLÜZ is designed for any company that wants to incorporate a simplistic design paired with an efficient file management system to add, edit and delete data. An enhanced filtering system has been considered for users who wish to get more out of the experience.

CLÜZ will incorporate large button layout and universally recognizable symbols for ease of navigation.

Features

The main feature proposed will be an efficient way to manage clothing for a retail business or warehouse environment. Features of CLÜZ include but are not limited to:

1. adding new items, editing existing items, removing unwanted items, filtering by name, size, gender, brand, etc., secure login server, item search bar, images associated with each item and resizable windows.

Each item will be assigned a unique ID number to be stored inside a secure database. The user can retrieve said item via ID tag or filter using any of the implemented features to find it. Pictures of each product can also be added for quick recognition in the search tool.

Filtering options will be applied using physical buttons on the sidebar of the application. When clicked, drop down menu indicating various selectable options. When editing and adding a new item, a pop-up window will appear containing all the required fields listed above.

Advanced filtering options can be implemented via different sorting techniques with arrays. Each class will contain one element (eg, size, name, brand), a UML diagram will be provided in the proposal to clearly demonstrate each class relationships. Sample file description chart shown below demonstrates a real example of an item stored into CLÜZ and the criteria it will contain. Screen designs are included inside proposal. Each new screen demonstrates a new state that the user can access through various buttons or menus.

Features

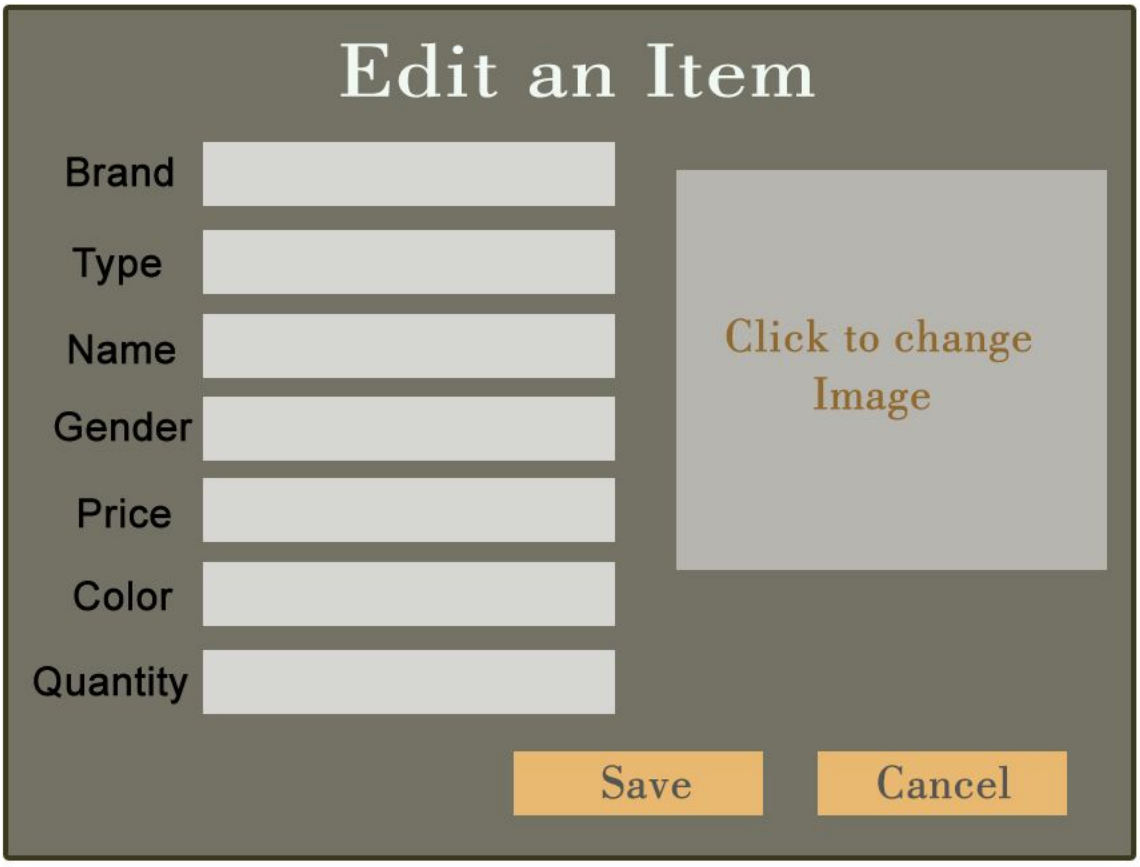
1. Administrative logins to access inventory system
2. Modifying product list with a click of a button
3. Inventory searching and filtering
4. Export inventory list to CSV file

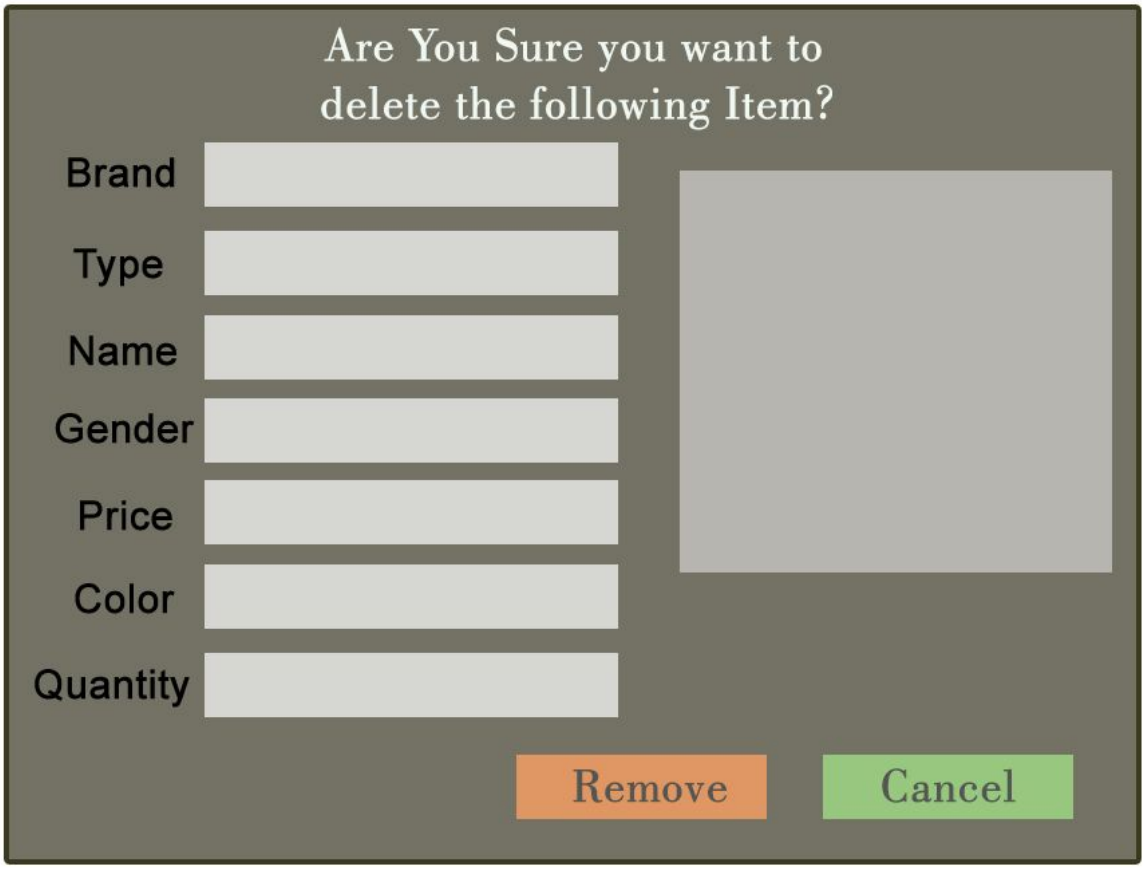
File Description Chart

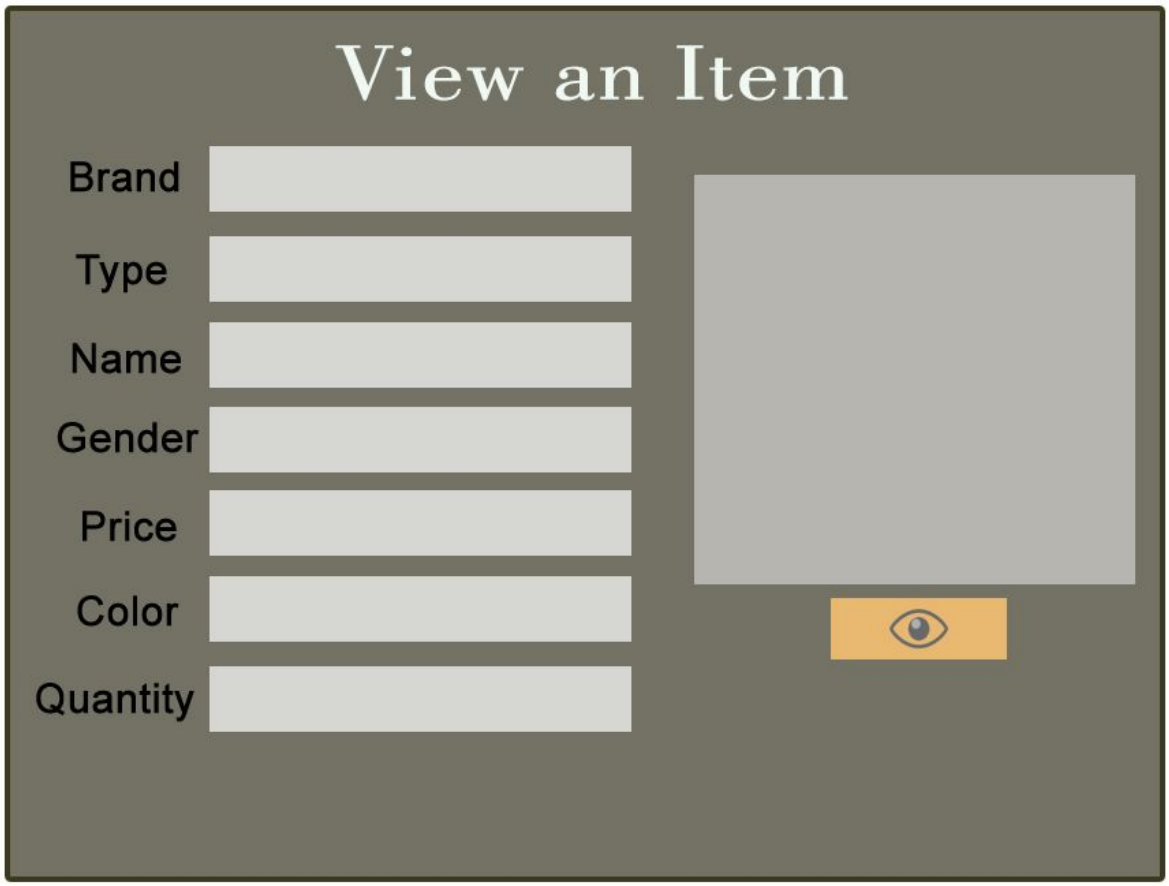
ClothingList.csv	Pants Product		
Description	Data Type	Values	Comments
productId	int	323523	Identifies the unique product
productName	String	Henley Khaki Pants	Product's unique name
color	String	Black	Color of the product
price	double	$24.99	Price of the product
size	Size	32W	Size of the product
gender	Gender	Men	Gender that uses the product
quantity	int	20	Amount of this product in inventory

Interface

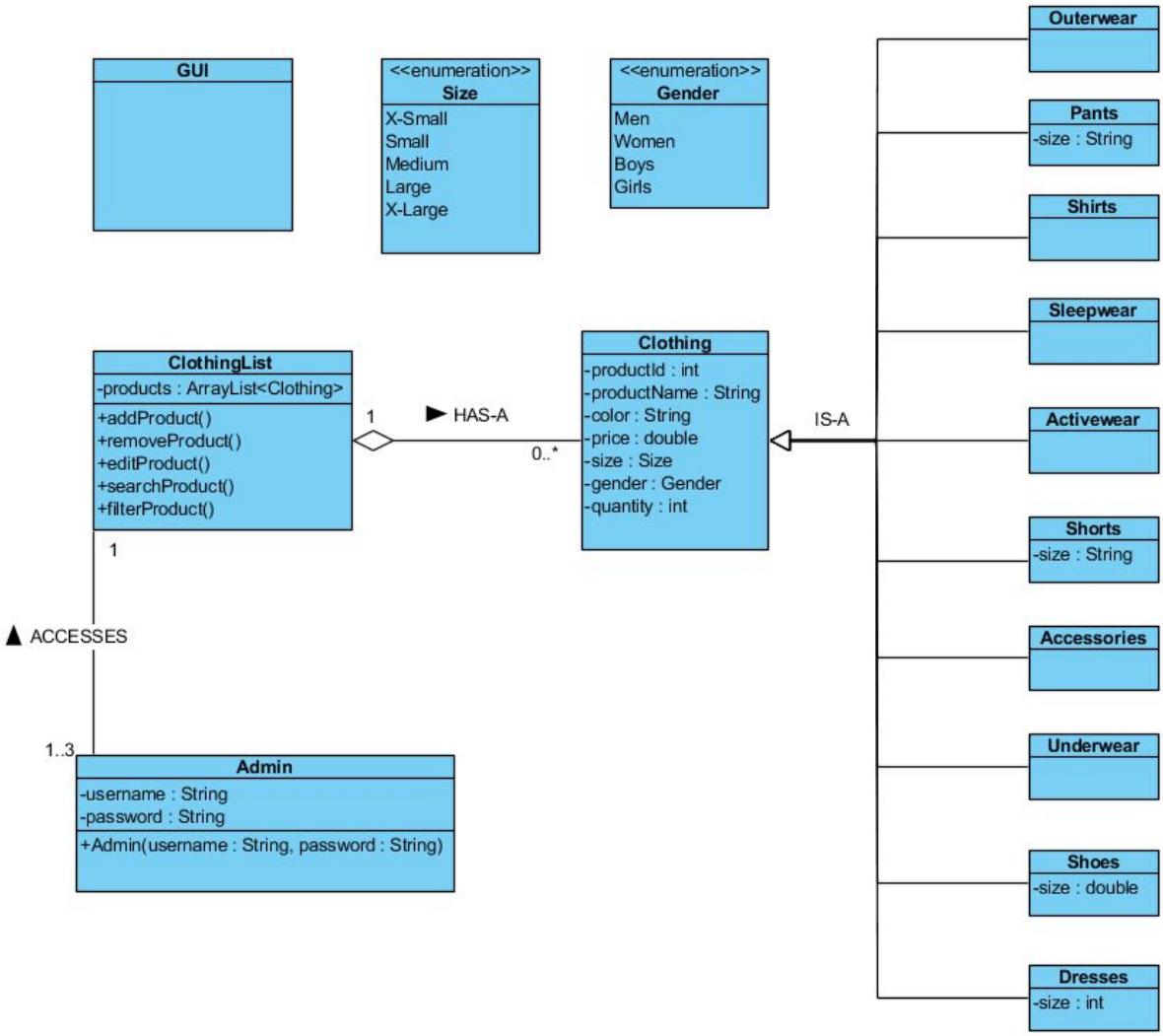
A prototype of the project:
https://projects.invisionapp.com/share/8WQWA8JZSBM#/screens/350988921


Edit an Item
Brand
Type
Name
Gender
Price
Color
Quantity
Click to change Image
Save
Cancel


Are You Sure you want to delete the following Item?
Brand
Type
Name
Gender
Price
Color
Quantity
Remove
Cancel


View an Item
Brand
Type
Name
Gender
Price
Color
Quantity

UML Diagram



Preliminary UML class diagrams indicating the relationships between the classes.

Others

CLÜZ will be primarily developed using Apache NetBeans 10.0 IDE. It will incorporate a fully functioning object-oriented model along with JavaFX for GUI elements. Database storage will be stored inside CSV files, being accessible through java compilation. UML diagrams attached are completed in Visual Paradigm through integration via Apache NetBeans 10.0. All sample Screen designs are drawn via CorelDRAW Graphic Design Suite and Adobe Photoshop. All proposed diagrams will aim to follow conventional user interface design principles.

Initial research would be conducted for a preliminary survey from retail websites and existing inventory systems to take inspiration and model examples. Then the proposed changes will be implemented into CLÜZ. Inspirations for design may be pulled from top competitors such as “Fishbowl Inventory” and “Agiliron Inventory Management”. Typical retail websites may include “Gap” and “Amazon”. However, the final product will be an original implementation designed by team members.

Division of responsibilities will be shared amongst team members. The code will be uploaded on GitHub and all members will have equal input and modification access for each section.