CSCI 495 FA 24

Capstone Project User Documentation - Brooke Poulton

DIRECTIONS:
Answer each question below, but do not remove the question itself. This is a working document and is part of your capstone project. As you add to this document, focus on writing with clarity and using proper mechanics (esp. grammar, punctuation, capitalization).

ADDRESS FORMATTING ISSUES (bold, italics, etc)

The requirements of this document are based on *IEEE Software User Documentation*

Contents

PART 1 – INITIAL INFORMATION

INTRODUCTION

Provide an introduction to the system you created. *The introduction shall describe the intended audience, scope, and purpose for the document and include a brief overview of the software purpose, functions, and operating environment. Be sure to refer to your IS Environment and how this project specifically supports your environment. In this section, provide the specific needs of different types of* *users. You'll then refer those users to the section(s) of the document that pertain to their needs (general users, admins, etc...) to help them more efficiently use the document.*

Introduction:

The Beaumont Jewelry Boutique Inventory Management System is a custom-built software solution designed to enhance the efficiency and accuracy of inventory management for a small jewelry business. This user documentation provides a comprehensive guide to help users navigate and operate the system effectively and securely, catering to the specific needs of both employees and managers.

Intended Audience:

This documentation is intended for employees and managers of Beaumont Jewelry Boutique who will use the system as part of their daily operations. The documentation outlines the functionalities and responsibilities relevant to each user role, ensuring users can efficiently navigate the system.

- Employees (General Users):
  - Record sales and restocks.
  - View real-time inventory levels and supplier details.
  - Search for inventory and supplier information.
  - Access a personalized dashboard tailored to their role and responsibilities.
- Managers (Administrators):
  - Manage categories (add/delete).
  - Manage suppliers (add, update, delete).
  - Manage users (add, update, deactivate).
  - Manage inventory products (add, update, mark as inactive).
  - Perform all general user tasks, including recording sales and restocks.
  - Access an admin-specific dashboard with enhanced administrative tools.
- Shared Features:
  - Both employees and managers share some key functionalities to perform essential tasks efficiently:
    - Secure login/logout process.
    - Viewing and searching inventory and suppliers
    - Changing personal passwords for account security.

Scope and Purpose of the Document:

This document aims to:

- Provide step-by-step guidance for navigating the system based on user roles.

- Ensure secure use of system features while maintaining privacy and data integrity.
- Support efficient inventory, sales, restock, supplier, and user management.

Overview of Software Purpose, Functions, and Operating Environment

The Beaumont Jewelry Boutique Inventory Management System is developed to streamline and secure inventory management in a small business environment. By utilizing PHP for backend logic and phpMyAdmin for database management, the system is accessible via standard web browsers. The front end utilizes HTML, CSS, and JavaScript for a responsive and user-friendly interface, ensuring accessibility across devices.

This system is directly aligned with my business minor, as it addresses key operational needs within the inventory management space, helping small businesses optimize inventory accuracy, manage suppliers efficiently, and secure sensitive data. The features of the system help meet the core objectives of my business studies, which emphasize improving business operations, enhancing data handling, and ensuring security within business software solutions.

The specific features of the system include:

- Streamlined Operations:
  - Efficiently record and track sales and restocks to maintain inventory accuracy. The system provides an intuitive interface with easy-to-use menus and data forms, tailored to meet the needs of both employees and managers.
- Role-Based Access:
  - Role-specific dashboards ensure users only access features relevant to their responsibilities. Employees can view inventory, search data, and record transactions, while administrators have broader control over inventory, categories, users, and suppliers.
- Management Capabilities:
  - Administrators can manage categories and suppliers, as well as mark products or users as inactive, improving control over business assets.
- Enhanced Search Functionality:
  - Users can easily search for inventory items, suppliers, and categories, facilitating quick and effective data retrieval.
- Secure Environment:
  - The system requires password protection, allowing users to change their own passwords for security. Role-based access restrictions ensure only authorized users can modify critical data, maintaining data integrity.
- User-Friendly Interface:

- The system features a clean, modern design using HTML for structure, CSS for styling, and JavaScript for dynamic elements like form validation and real-time search results. The responsive design ensures the system functions smoothly across desktops, laptops, and mobile devices.

Document Structure:

The user documentation is organized into sections that address the specific needs of different user roles:

- Employees:
  - Refer to **Section II & V** for instructions on viewing inventory, and navigating the user dashboard
- Managers:
  - Refer to **Section I & IV** for advanced features, including managing suppliers, categories, and user accounts, and navigating the admin dashboard
- Shared Features:
  - Refer to **Section III & VI** for shared functionalities such as recording sales/restocks, login/logout procedures, search functionality, and changing personal passwords

CRITICAL INFORMATION

Explain the critical information related to your project. *Focus on providing information on the security of the information created with the software, or the privacy of the information created by or stored with the software. You must clearly include both of the following in your answer:*

— Address ethical/legal issues of your project (this might be tied into your IS Environment) and
— Demonstrate an awareness of security and information assurance considerations. Provide resources for each.

The Beaumont Jewlery Boutique Inventory Management System handles sensitive business data, including inventory records, supplier details, and employee information. It is critical that the system ensures the security and privacy of this data while adhering to ethical and legal standards.

Ethical and Legal Considerations:

The following principles from the ACM Code of Ethics are relevant:

1. Section 1.1 Contribute to Society and Human Well-Being, acknowledging that all people are stakeholders in computing:
   a. The system should support the legitimate business needs of the Jewlery Boutique while ensuring protection and security of personal and business data

2. Section 1.3 Be Honest and Trustworthy:
    a. Users should have confidence that the system's data is accurate, and managers should be able to trust that inventory and sales data are correctly recorded and cannot be tampered with. Transparent security measures such as password hashing and role-based access help build trust between the users and the system
3. Section 1.6 Respect Privacy:
    a. As employees and suppliers' information is stored in the system, it is crucial that their privacy is protected. Any unauthorized access to personal or business data could result in legal liabilities
4. Section 1.7 Honor Confidentiality:
    a. The system should keep the employee's login details, supplier contracts, and other sensitive business data stored securely. Only authorized users should have access to modify or view confidential information, always ensuring privacy and confidentiality
5. Section 2.8 Access Computing and Communication Resources Only When Authorized or When Compelled by the public good:
    a. The system should strictly enforce access control policies, ensuring that only authorized personnel can access sensitive data and features. Unauthorized access should be prevented.
6. Section 2.9: Design and Implement Systems That are Robustly and Usably Secure:
    a. The system should incorporate strong security measures from the start to safeguard against both accidental and intentional misuse. It should include continuous monitoring, regular updates, and a proactive approach to addressing vulnerabilities.
7. Section 3.1: Ensure that the Public Good is the Central Concern During all Professional Computing Work:
    a. The system should prioritize the well-being of employees, suppliers, and the broader community in all stages of its design, development, and deployment.
8. Section 3.7: Recognize and Take Special Care of Systems that become integrated into the Infrastructure of Society:
    a. As the system becomes integrated into the boutique's operations and potentially other business infrastructures, it should be managed responsibly.
9. Section 4.1: Uphold, Promote, and Respect the Principles of the Code:
    a. The system should be developed in adherence to the ACM Code of Ethics, and all stakeholders involved should be committed to upholding these principles.

Security and Information Assurance Considerations:

To ensure security and integrity of the system, several considerations should be addressed as highlighted in industry resources such as the ISACA Journal on IT Security Assurance and the FFIEC Information Security Handbook:

1. Confidentiality, Integrity, and Availability:
    a. Protecting the *confidentiality* of sensitive data means restricting access to authorized users only. The *integrity* of data ensures that it remains unaltered except through legitimate processes, and *availability* means ensuring that data is when needed. Having encryption access controls can help protect against these principles (ISACA Journal, FFIEC Handbook).
2. Risk Management and Vulnerability Assessments:
    a. Identifying potential risks and vulnerabilities through regular assessments is crucial. Appropriate mitigation strategies should be deployed to minimize risk exposure. According to the FFIEC Handbook, effective risk management involves not just identifying vulnerabilities but also continually assessing arising threats and updating security protocols accordingly. Risk Management involves understanding the nature and extent of threats and implementing controls to eliminate or reduce those risks (FFIEC Handbook).
3. Access Control and Authentication:
    a. Implementing strong role-based access control ensures that only authorized users can access specific data and functions. Additionally, multi-factor authentication can provide an added layer of security, helping to prevent unauthorized access to critical systems. These practices, as discussed in the ISACA Journal, are essential to protecting sensitive systems and ensuring that only those with the right credentials can perform certain operations (ISACA Journal).
4. Incident Response and Recovery:
    a. Being prepared for potential security incidents with a solid incident response plan is crucial. This plan should include the identification of security breaches, containment strategies, and timely recovery actions to restore the system to a secure state, ensuring minimal disruption to operations. This is an important aspect of information security assurance as emphasized by both the ISACA journal and FFIEC Handbook (ISACA Journal, FFIEC Handbook).

PART 2 – SYSTEM USE

GENERAL USE OF THE SYSTEM

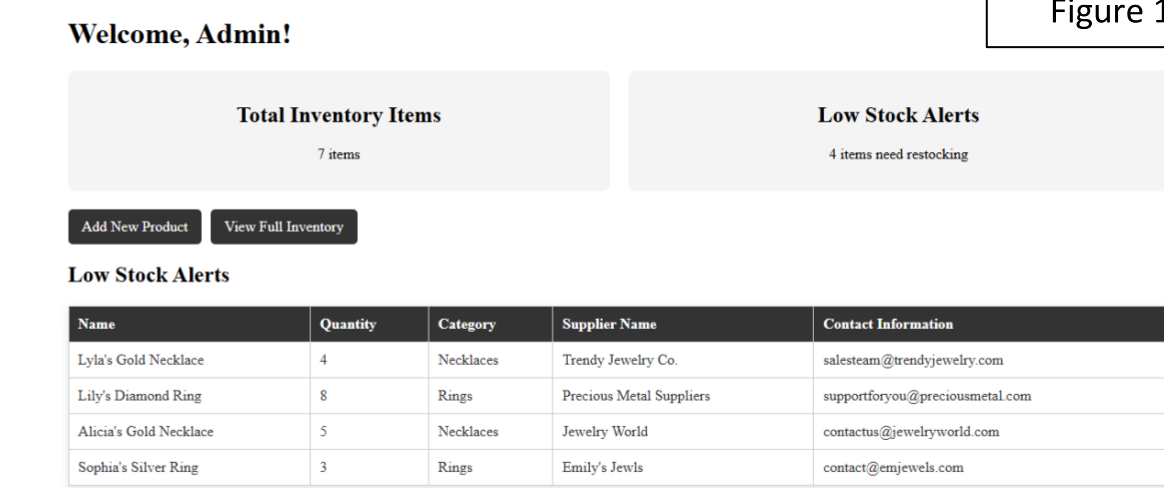
Provide information for general use of the software. *Include instructions for routine activities that are applied to several functions. You can combine sections where your specific audiences share/use the same feature. Be sure to use proper headings and subheadings to distinguish each part of this document. Use screenshots/figures where new screens are visible Use figure numbers to refer to figures* *in your narrative.*

— Software installation and de-installation, if performed by the user
— Orientation to use of the features of the graphical user interface
— Access, or log-on and sign-off the software
— Navigation through the software to access and to exit from functions
— Data operations (enter, save, read, print, update, and delete)
— Methods of canceling, interrupting, and restarting operations

Section I: Administrative Functions:

I. Admin Dashboard:
   a. When you log in as an admin, you are directed to the Admin Dashboard. The main page gives you an overview of key information related to the inventory and offers convenient access to various inventory management tasks (see figure 1).

Figure 1



      i. Inventory Overview Section
         1. Upon entering the admin dashboard, you will immediately see an overview section with the following key details:
            a. Total Inventory Items: The dashboard displays the total number of items currently in the product inventory. This information helps you understand the size of your current inventory is and provides a quick snapshot of the number of products managed within the system (see

figure 2)

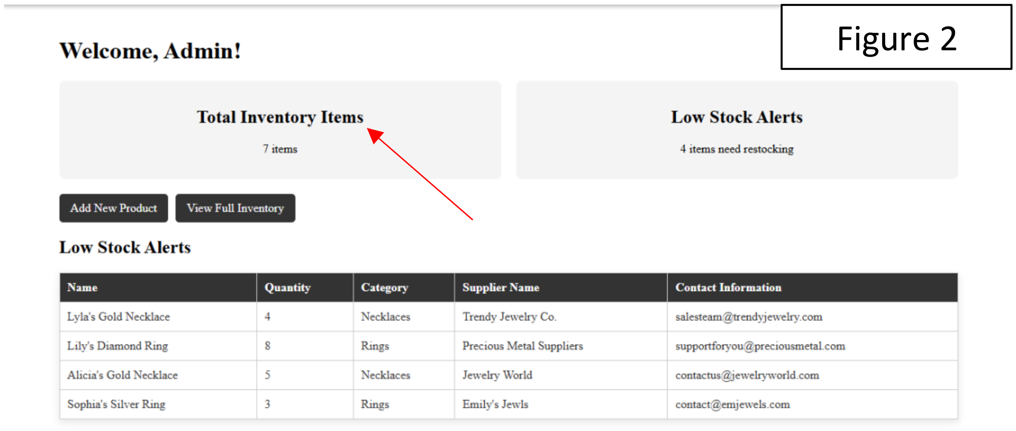


Figure 2

b. Low Stock Alerts: This section informs you about products that have low stock. A low stock is considered a quantity less than 10. These items will be flagged, and you will be shown how many items require restocking (see figure 3). This helps you stay proactive in replenishing inventory before running out of stock

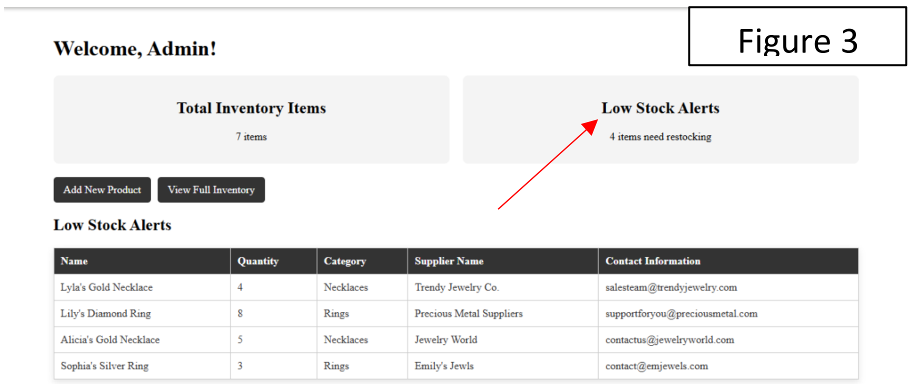
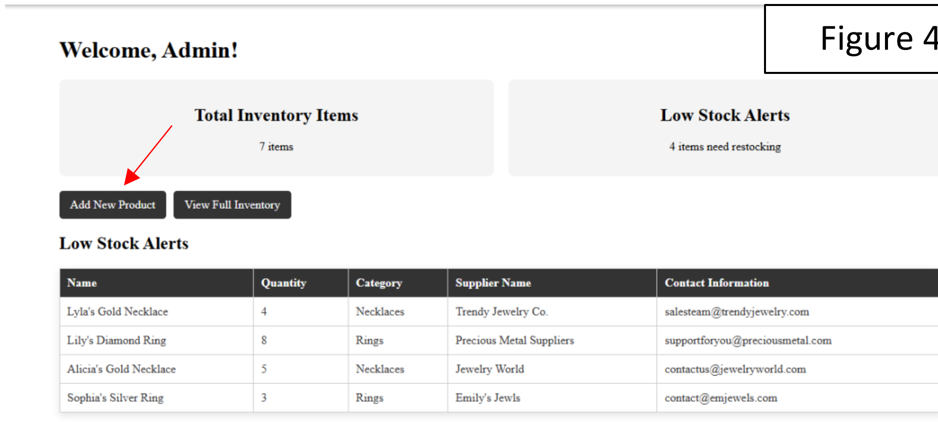


Figure 3

ii. Action Buttons:

1. At the bottom of the dashboard, you will find two action buttons:

a. Add New Product: Clicking this button (see figure 4) will direct you to a page where you can add new items to the inventory. This option is essential for expanding the product catalog or updating inventory with newly available items


Welcome, Admin!

Total Inventory Items
7 items

Low Stock Alerts
4 items need restocking

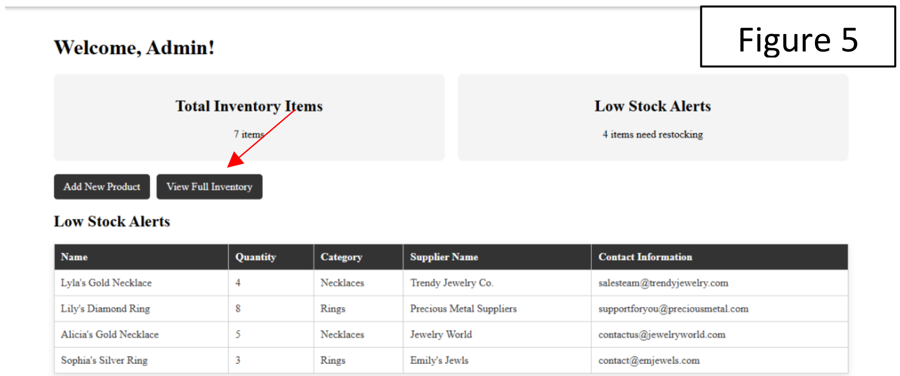
Add New Product
View Full Inventory

Low Stock Alerts

Name	Quantity	Category	Supplier Name	Contact Information
Lyla's Gold Necklace	4	Necklaces	Trendy Jewelry Co.	salesteam@trendyjewelry.com
Lily's Diamond Ring	8	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	5	Necklaces	Jewelry World	contactus@jewelryworld.com
Sophia's Silver Ring	3	Rings	Emily's Jewls	contact@emjewels.com

Figure 4

b. View Full Inventory: This button will take you to a page where you can manage and view all the inventory items at once (see figure 5). It allows you to inspect product details, edit quantities, or mark items inactive as needed.


Welcome, Admin!

Total Inventory Items
7 items

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4 items need restocking

Add New Product
View Full Inventory

Low Stock Alerts

Name	Quantity	Category	Supplier Name	Contact Information
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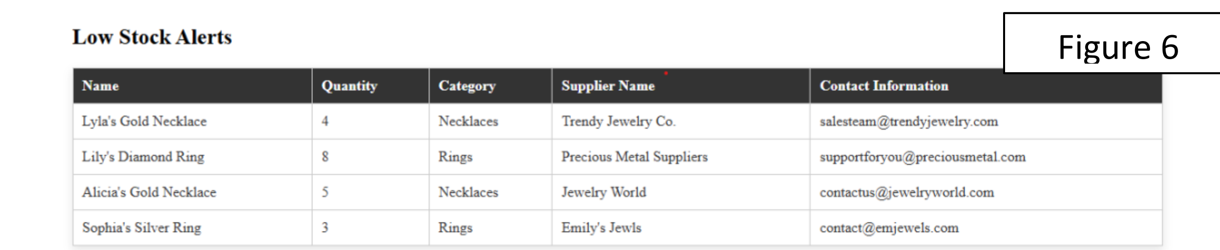
Lily's Diamond Ring	8	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	5	Necklaces	Jewelry World	contactus@jewelryworld.com
Sophia's Silver Ring	3	Rings	Emily's Jewls	contact@emjewels.com

Figure 5

iii. Low Stock Alerts:

1. If there are low-stock items, they will be listed below the dashboard in a table format (see figure 6). This table will show:
   a. Item Name
   b. Quantity on Hand
   c. Category Name
   d. Supplier Name
   e. Supplier Contact Information


Low Stock Alerts

Name	Quantity	Category	Supplier Name	Contact Information
Lyla's Gold Necklace	4	Necklaces	Trendy Jewelry Co.	salesteam@trendyjewelry.com
Lily's Diamond Ring	8	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	5	Necklaces	Jewelry World	contactus@jewelryworld.com
Sophia's Silver Ring	3	Rings	Emily's Jewls	contact@emjewels.com

Figure 6

iv. No Low Stock Alert:

1. If there are no low-stock items, a message will appear to inform you that all products are sufficiently stocked (see figure 7). This keeps you updated on how your overall inventory is doing.

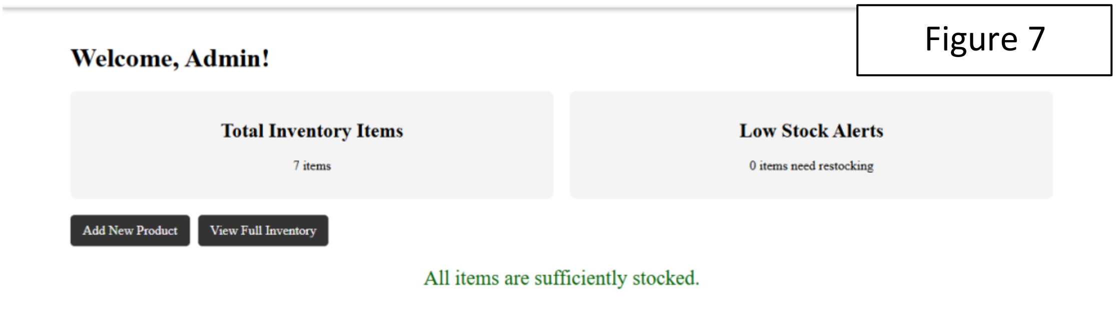


Figure 7

II. <u>Manage Inventory Items:</u>
   a. The manage inventory page allows managers to:
      i. Search for specific inventory items using any attribute
      ii. View and manage a detailed list of all inventory records
      iii. Perform actions such as updating, deleting, marking inactive
      iv. Restock items with low quantities

   These functionalities are organized into distinct sections to enhance usability (see figure 8)
   b. Search Inventory (see Section III Shared Functions for details on how to use the search function)

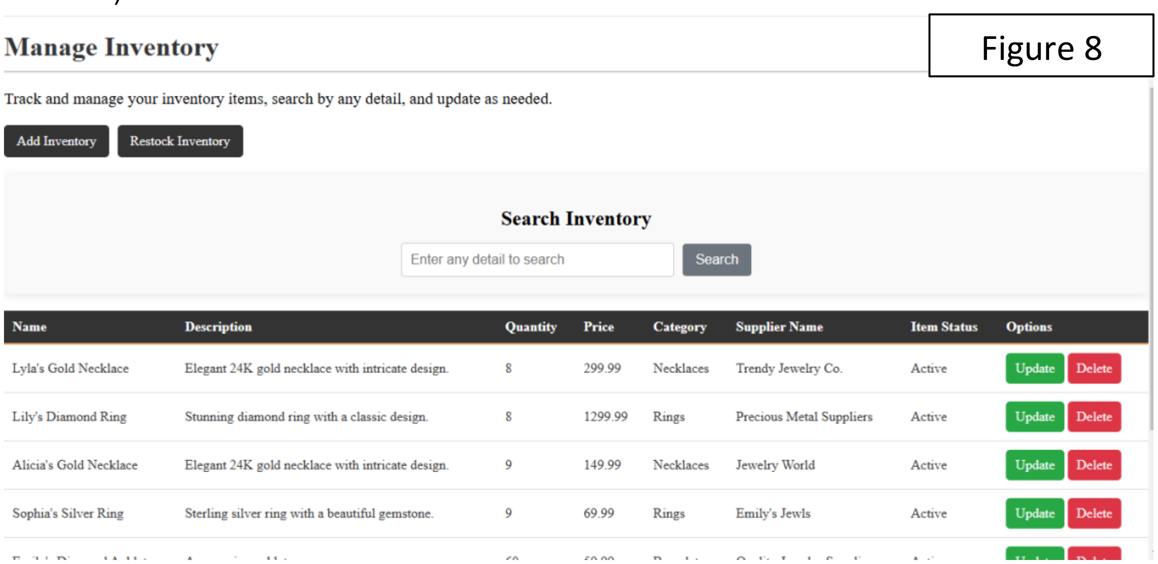


Figure 8

c. Inventory Table: The table displays a detailed overview of all inventory items in the system (see figure 8).

The columns in the tables are as follows:

1. Name: The product name
2. Description: A brief description of the item
3. Quantity: The current stock number of the item
4. Price: The price the item is being sold at
5. Category: The classification of the product (necklace, bracelet, etc.)
6. Supplier Name: The name of the supplier providing the product
7. Item Status: Indicates whether the product is *Active* or *Inactive*

Sorting and Status are as follows:

1. Active items are prioritized at the top
2. Inactive items are displayed below active ones

d. Action Buttons: These buttons allow users to add new inventory or update existing records

i. Add Inventory (see figure 9):

1. Click the Add Inventory Button to open a form for adding new products.
2. Fill in all fields as they are all required
3. Hit the add item button to add it to the inventory

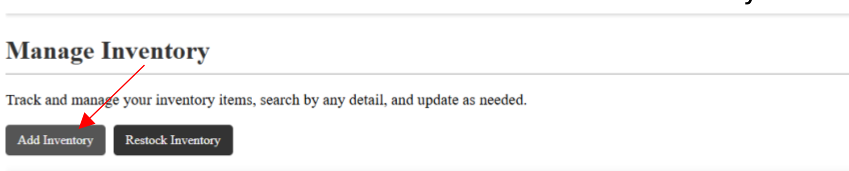


Figure 9

ii. Restock Inventory (see figure 10):

1. Click the Restock Inventory button to update the stock levels of existing items
2. Enter the new quantities in the provided form and confirm the changes. More details about this feature in Section III: Shared Functions

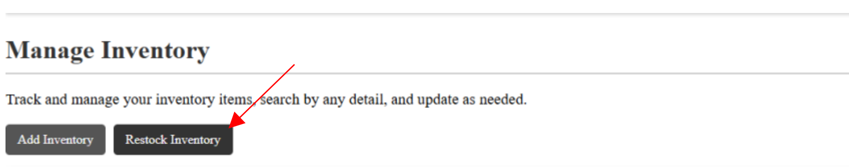


Figure 10

III. Add New Inventory Items:

a. As an admin user there are two ways to access the add inventory page:

i. Admin Dashboard: Upon logging into the system, you are automatically directed to the admin dashboard (see Figure 1). On this page there is a button labeled “Add Inventory (see Figure 2)” Clicking this button will take you directly to the add inventory page, where you can input item details such as the item name, item description, item quantity, item price, item category, and the supplier that is supplying the item (see Figure 11).

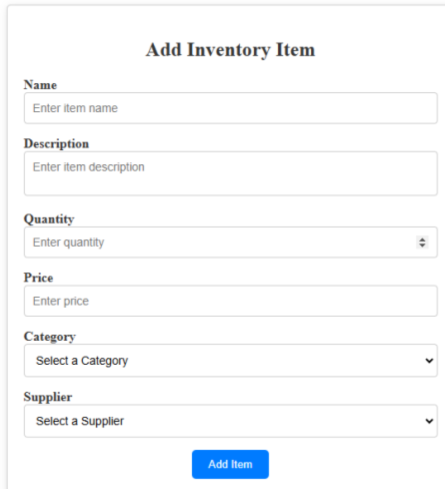


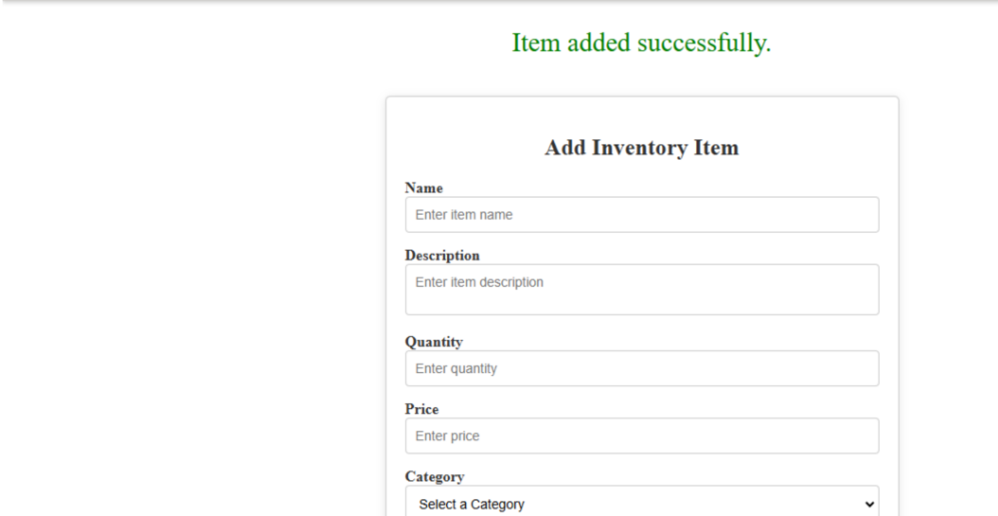
Figure 11

ii. Manage Inventory Tab: Alternatively, you can navigate to the Manage Inventory tab in the navigation bar at the top of the page (see figure 12). On this page, there is another button labeled "Add Inventory (see Figure 9)." Clicking this button will also direct you to the add inventory page where you can input item details such as the item name, item description, item quantity, item price, item category, and the supplier that is supplying the item (see Figure 11).

Figure 12

Once on the Add Inventory page, you can enter all necessary item details and click the Add Item button to add the item to the system. Upon Success, the form resets and a success message is displayed (see figure 13)

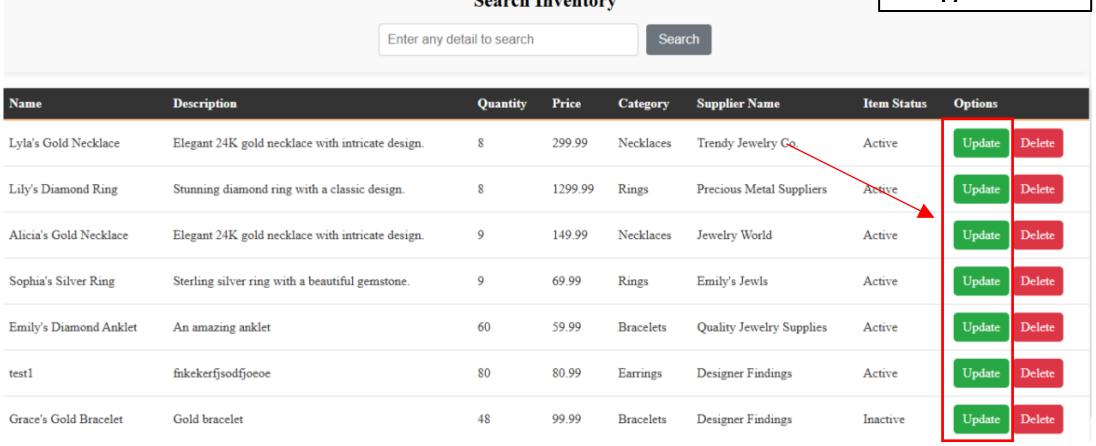
Figure 13



IV. <u>Updating Inventory Items:</u>

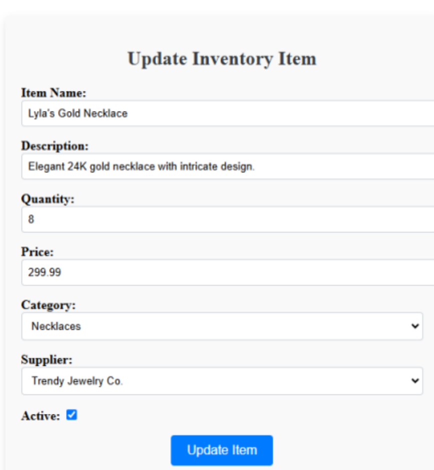
Managers can access the Update Inventory page by clicking the Update button next to the product they would like to update on the Manage Inventory Page (see figure 14). This opens a detailed pre-filled form with the selected product's current details (see figure 15).

Figure 14



Name	Description	Quantity	Price	Category	Supplier Name	Item Status	Options
Lyla's Gold Necklace	Elegant 24K gold necklace with intricate design.	8	299.99	Necklaces	Trendy Jewelry Co.	Active	Update Delete
Lily's Diamond Ring	Stunning diamond ring with a classic design.	8	1299.99	Rings	Precious Metal Suppliers	Active	Update Delete
Alicia's Gold Necklace	Elegant 24K gold necklace with intricate design.	9	149.99	Necklaces	Jewelry World	Active	Update Delete
Sophia's Silver Ring	Sterling silver ring with a beautiful gemstone.	9	69.99	Rings	Emily's Jewls	Active	Update Delete
Emily's Diamond Anklet	An amazing anklet	60	59.99	Bracelets	Quality Jewelry Supplies	Active	Update Delete
test1	fnkekerfjsodfjoeoe	80	80.99	Earrings	Designer Findings	Active	Update Delete
Grace's Gold Bracelet	Gold bracelet	48	99.99	Bracelets	Designer Findings	Inactive	Update Delete

Figure 15



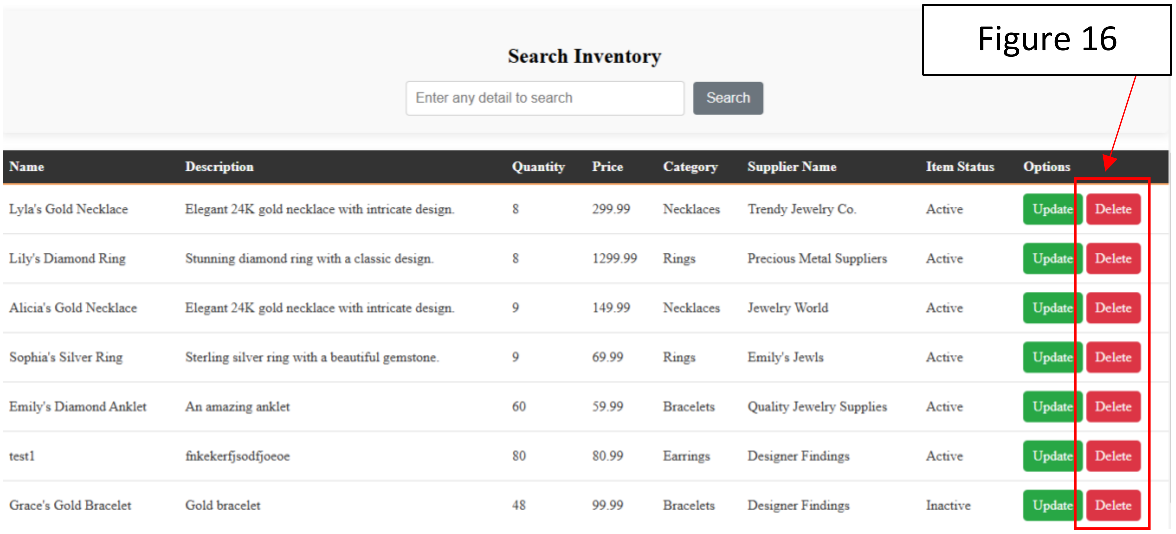
a. The Update Inventory form includes the following fields, and all fields are required (see figure 15):
    i. Item Name:
        1. Displays the current name and is editable to reflect changes
        2. Ensures the name in unique within the inventory list
    ii. Description:
        1. Allows updating the product description for better clarity
    iii. Quantity:
        1. Accepts values between 0 and 1000. Any value lower then 0 or greater than 1000 will result in an error
    iv. Price:
        1. Accepts values between 0 and 5000. Any value lower then 0 and greater then 5000 will result in an error.
    v. Category:
        1. Dropdown listing existing categories
    vi. Supplier:
        1. Dropdown listing all suppliers
    vii. Status (Active/Inactive)
        1. Checkbox to indicate whether the product is available in the inventory

b. Once on the Update Inventory page, you can change all necessary item details and click the Update Item button to update the item to the system.

V. <u>Deleting Inventory Items:</u>

The Delete Inventory Item page is designed to allow managers to remove items from the inventory database while ensuring data integrity. Items associated with existing sales records cannot be deleted and must instead be marked inactive through the Update Inventory Page (Section I-III). Managers can access the Delete Inventory Item page by clicking the Delete button next to an item on the Manage Inventory Page (see figure 16).

Figure 16



Name	Description	Quantity	Price	Category	Supplier Name	Item Status	Options
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Emily's Diamond Anklet	An amazing anklet	60	59.99	Bracelets	Quality Jewelry Supplies	Active	Update Delete
test1	fnkekerfjsodfjoeoe	80	80.99	Earrings	Designer Findings	Active	Update Delete
Grace's Gold Bracelet	Gold bracelet	48	99.99	Bracelets	Designer Findings	Inactive	Update Delete

a. Pre-Deletion Confirmation:

Upon accessing the page, the system will:

i. Display the item's name and confirms the admin's intent to delete (see figure 17)
ii. Warns about the consequences and ensures explicit action by the user
iii. If the manager does not want to delete, there is a link back to the manage inventory page below the delete button (see figure 17)

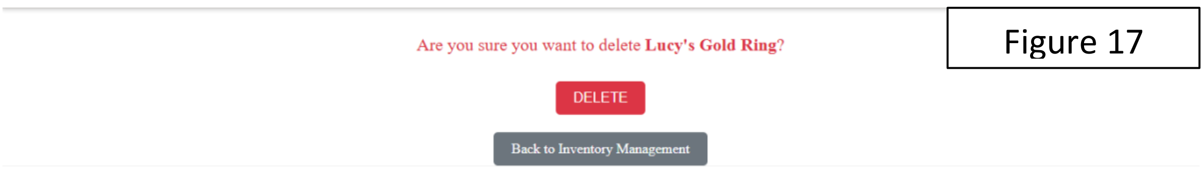


Figure 17

b. Validation for Sales Records:

Before deletion, the system checks for associated sales records:

i. If records exist:

1. The system displays an error message explaining the item cannot be deleted (see figure 18)
2. A link is provided to the Update Inventory page for marking the item inactive instead (see figure 18)

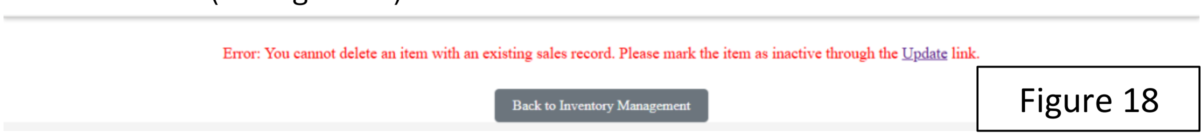


Figure 18

ii. If no records exist:

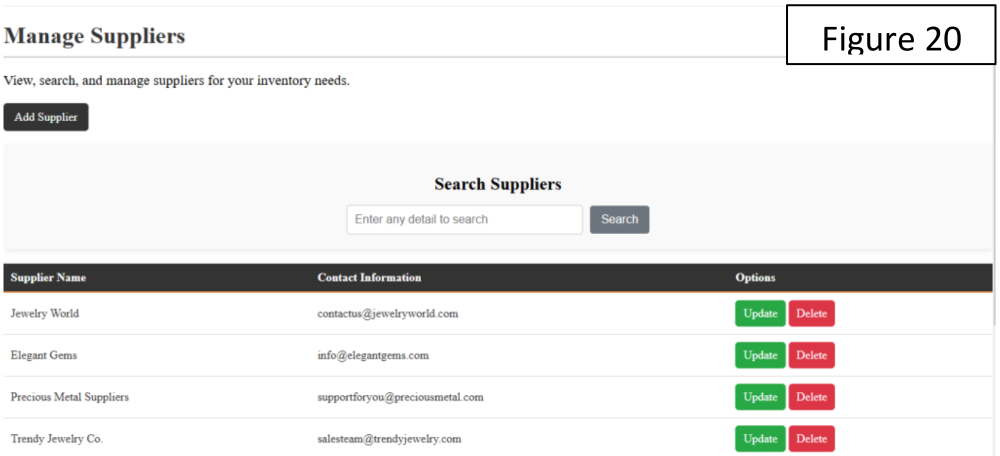
1. The system proceeds with the deletion process. Upon a successful deletion a success message will appear (see figure 19)

Figure 19

VI. <u>Manage Suppliers:</u>

The Manage Suppliers page allows managers to efficiently search for, view, and manage supplier records associated with inventory items (see figure 20).

Figure 20



Supplier Name	Contact Information	Options
Jewelry World	contactus@jewelryworld.com	Update Delete
Elegant Gems	info@elegantgems.com	Update Delete
Precious Metal Suppliers	supportforyou@preciousmetal.com	Update Delete
Trendy Jewelry Co.	salesteam@trendyjewelry.com	Update Delete

a. Search Suppliers (see Section III Shared Functions for details on how to use the search function)

b. <u>Suppliers Table:</u>

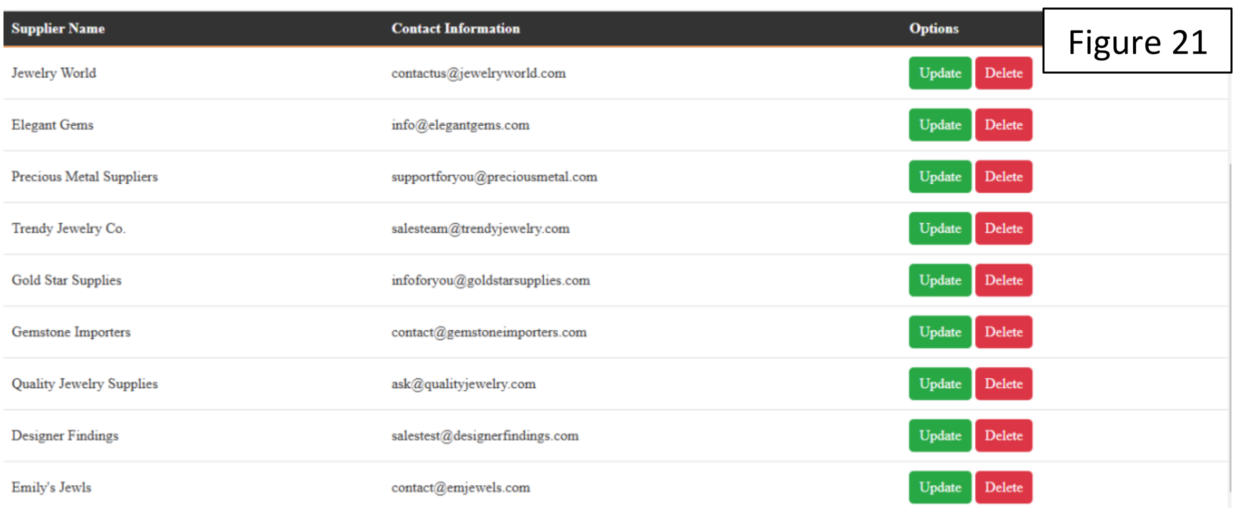
The table provides an overview of all supplier records (see figure 21) The columns are as follows:

i. <u>Supplier Name:</u> Display's the supplier's name

ii. <u>Contact Information:</u> Show's the supplier's contact details (email)

iii. <u>Options:</u> Contains action buttons to update or delete supplier records

Figure 21



Supplier Name	Contact Information	Options
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Elegant Gems	info@elegantgems.com	Update Delete
Precious Metal Suppliers	supportforyou@preciousmetal.com	Update Delete
Trendy Jewelry Co.	salesteam@trendyjewelry.com	Update Delete
Gold Star Supplies	infoforyou@goldstarsupplies.com	Update Delete
Gemstone Importers	contact@gemstoneimporters.com	Update Delete
Quality Jewelry Supplies	ask@qualityjewelry.com	Update Delete
Designer Findings	salestest@designerfindings.com	Update Delete
Emily's Jewls	contact@emjewels.com	Update Delete

c. <u>Action Buttons:</u>

i. <u>Add Supplier:</u> Clicking the "Add Supplier" button (see figure 22) opens a form where managers can input new supplier details (see figure 23). All fields are required to ensure complete records. Once submitted, the new supplier is added to the database and displayed in the Suppliers Table.

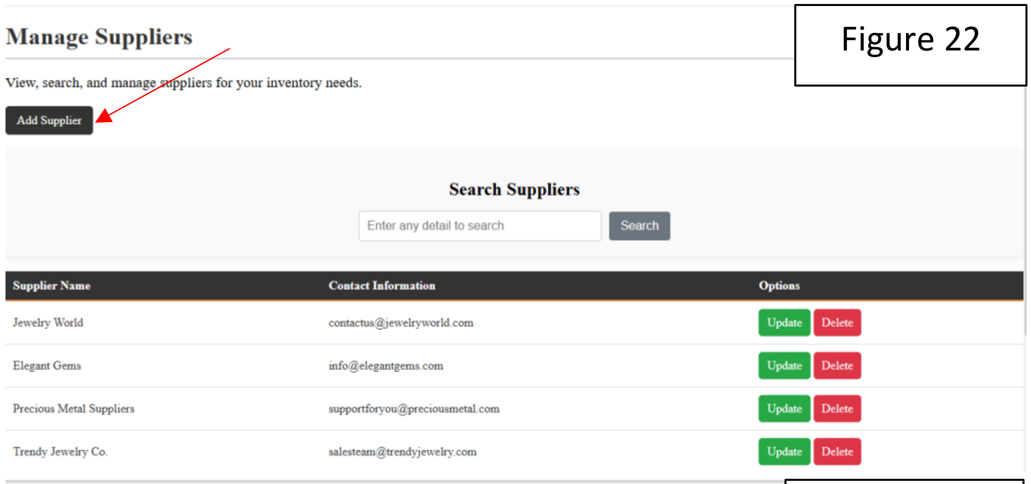
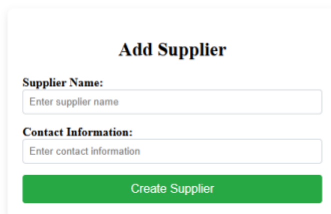


Figure 22

Figure 23



VII. <u>Adding Suppliers:</u>

To add a supplier, navigate to the Manage Suppliers tab in the navigation bar at the top of the page (see figure 24). On the Manage Suppliers page, there is a button labeled "Add Supplier" (see figure 22)

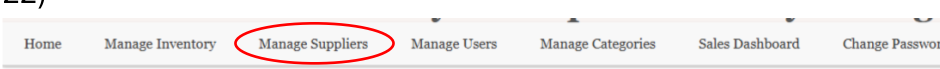


Figure 24

a. On the Add Supplier Page (see figure 23), fill out the following form fields (all fields are required)
   i. Supplier Name: Enter the supplier's name (e.g., Avery Jeweler Co.)
   ii. Contact Information: Enter the supplier's contact details (email)
b. Once all details are entered, click the Create Supplier button to add the supplier to the list (see figure 23).
c. Confirmations:
   i. If the supplier is successfully added, the form will reset, and a success message will appear (see figure 25)

Figure 25

ii. If there are errors, appropriate error messages will display, indicating what needs to be corrected

VIII. <u>Updating Suppliers:</u>

Managers can access the Update Supplier page by clicking the update button next to the supplier they wish to update on the Manage Suppliers page (see figure 26). This action opens a detailed pre-filled form with the selected supplier's current details (see figure 27)

Figure 26

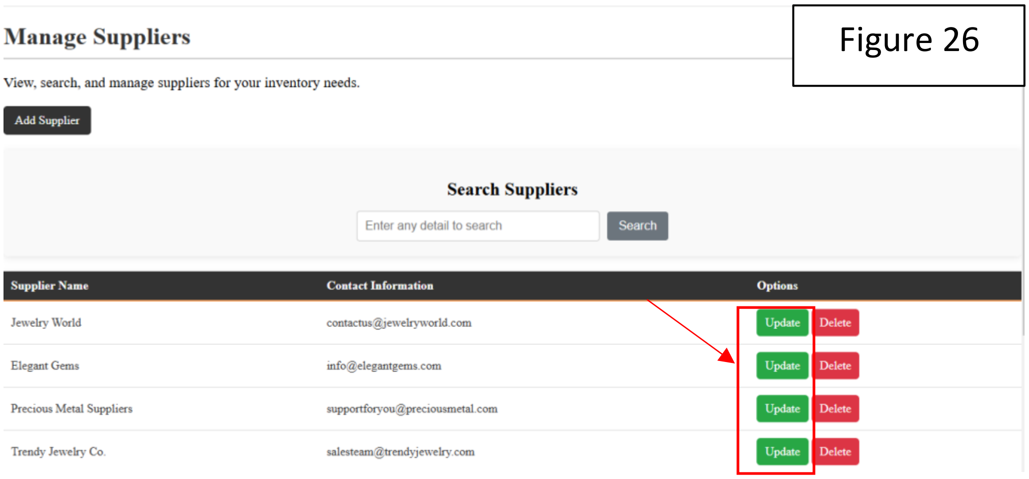
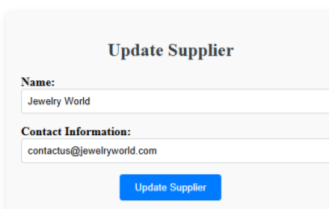


Figure 27



a. The Update Supplier form includes the following fields all of which are required (see figure 27):
   i. <u>Name:</u>
      1. Displays the supplier's current name and is editable for updates
      2. Ensures the name is unique within the supplier list
      3. If a duplicate name is entered, an error message will appear, and the update will not be processed
   ii. <u>Contact Information:</u>
      1. Displays the current contact details of the supplier and allows updating for accuracy
      2. Missing or invalid contact information will result in an error

   Once the user is done updating the supplier information. Click the update supplier button to update the supplier information (see figure 27).

b. <u>Successful Confirmation:</u>

i. Upon successful submission, a confirmation message will appear (see figure 28)

ii. The Manage Suppliers page will automatically refresh, showing the updated supplier details

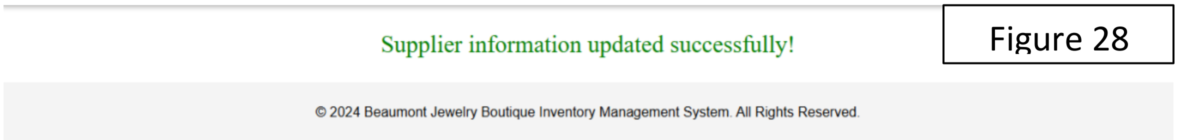


Figure 28

IX. Deleting A Supplier:

Managers can access the Delete Supplier page by clicking the delete button next to the supplier they wish to delete on the Manage Suppliers page (see figure 29).

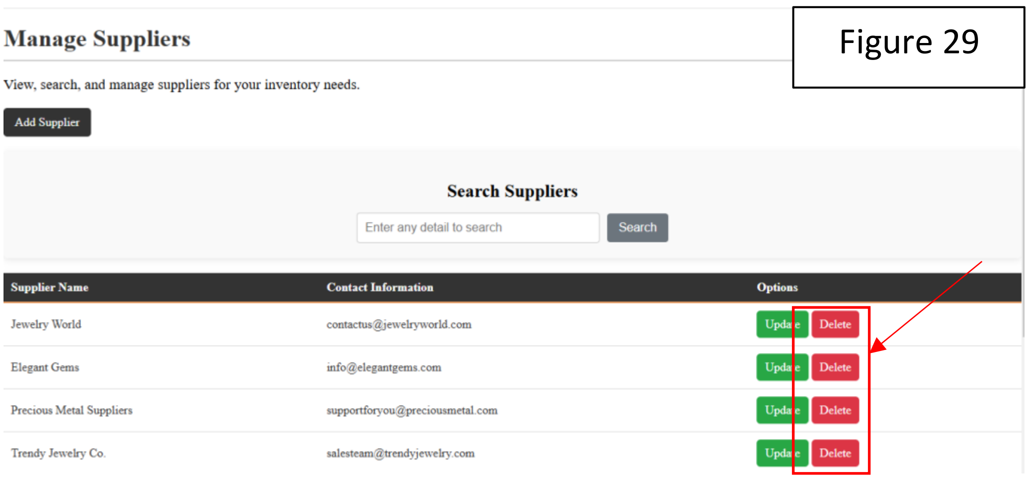


Figure 29

a. Supplier Confirmation:

i. The system displays a confirmation message showing the selected supplier's name (see figure 30)

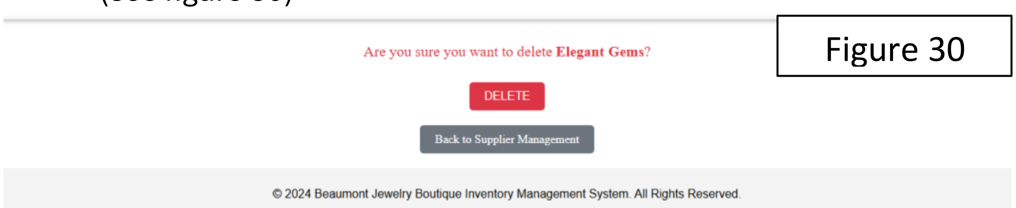


Figure 30

b. Associated Inventory Check:

i. If the supplier is linked to any inventory items, deletion will be blocked.

ii. An error message will appear (see figure 31)

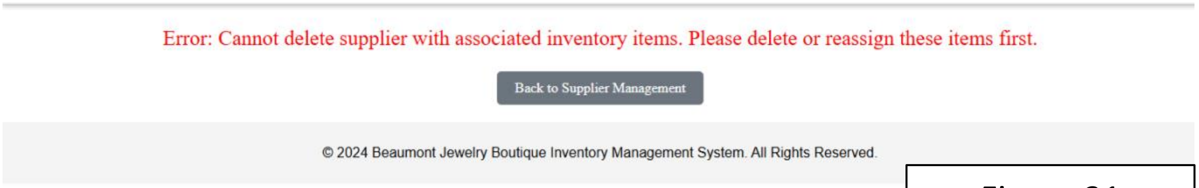


Figure 31

c. <u>Deletion Form:</u>

   If no associated inventory items exist and the supplier id found, a deletion confirmation is shown (see figure 30)

   i. A Delete button is provided to confirm the deletion (see figure 30). Once the delete button is hit a success message will indicate that the supplier was successfully deleted (see figure 32)

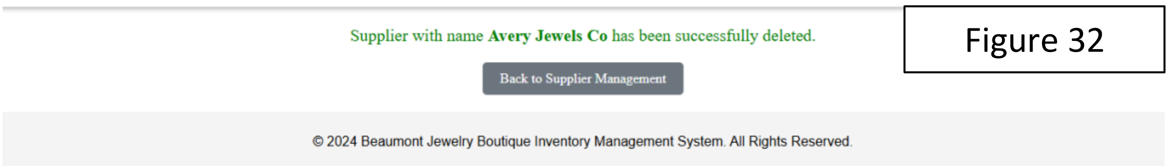


Figure 32

X. <u>Managing Users:</u>

To manage users, navigate to the Manage Users tab in the navigation bar at the top of the page (see figure 33).

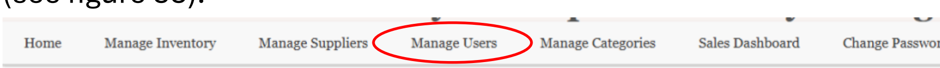
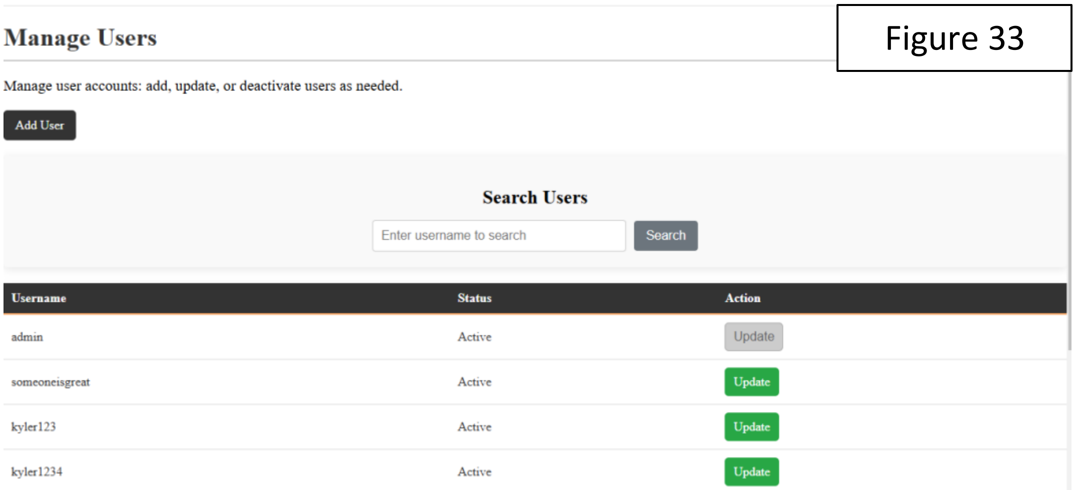


Figure 33

The Manage Users page allows managers to manage the user accounts of the system (see figure 34). This page provides functionalities such as:

a. Searching for specific users based on their username (see section III shared functions for more details on the search function)
b. View and manage a detailed list of all users in the system
c. Update user details (excluding the logged-in user)
d. View user statuses (Active or Inactive)

These actions are organized into clear sections to ensure efficient management



Manage Users

Manage user accounts: add, update, or deactivate users as needed.

Add User

Search Users

Enter username to search | Search

Username	Status	Action
admin	Active	Update
someoneisgreat	Active	Update
kyler123	Active	Update
kyler1234	Active	Update

Figure 33

e. Users Table:

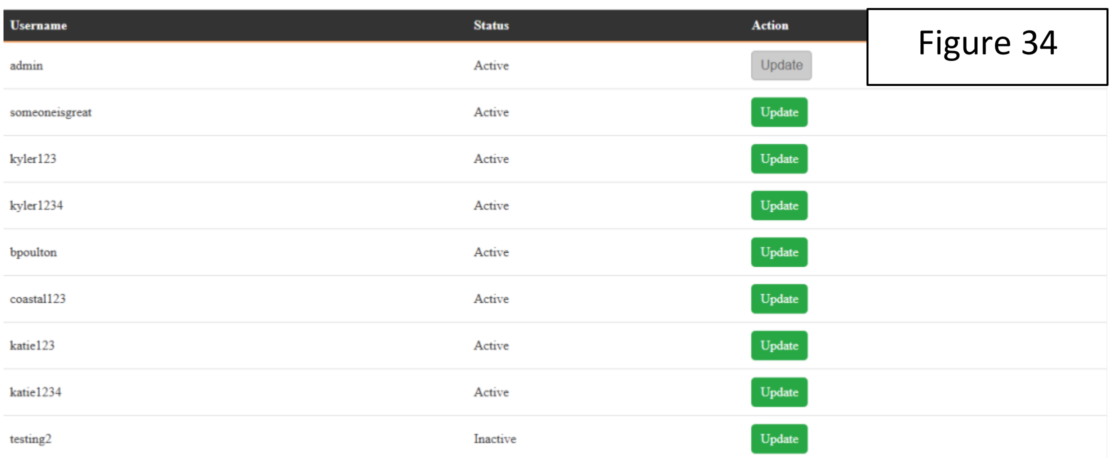
The table displays all user records in the system (see figure 35)

Columns in the table:

- Username: the user's username
- Status: Displays whether the user account is *Active* or *Inactive*
- Action: Allows administrators to update user information

Sorting and Status Rules:

- Active users are prioritized and displayed at the top of the table
- Inactive users are listed below active users



Username	Status	Action
admin	Active	Update
someoneisgreat	Active	Update
kyler123	Active	Update
kyler1234	Active	Update
bpoulton	Active	Update
coastal123	Active	Update
katie123	Active	Update
katie1234	Active	Update
testing2	Inactive	Update

Figure 34

f. Action Buttons:

i. Add User: Clicking the Add User Button (see figure 36) toward the top of the page opens a form for creating a new user (see figure 37)

Figure 35

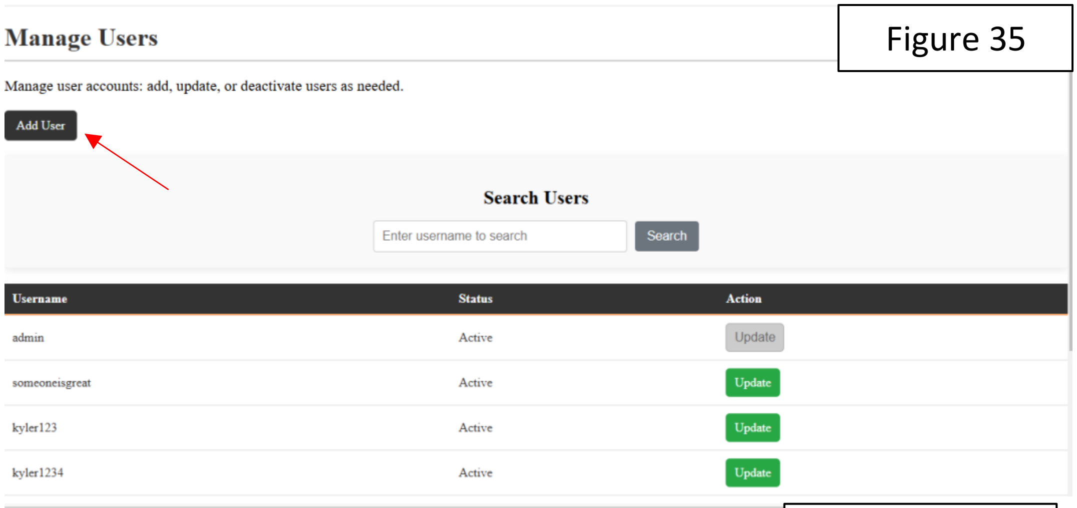
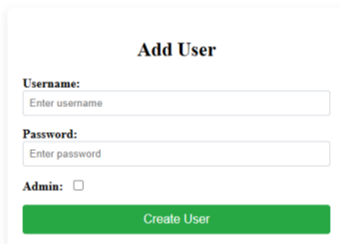


Figure 36



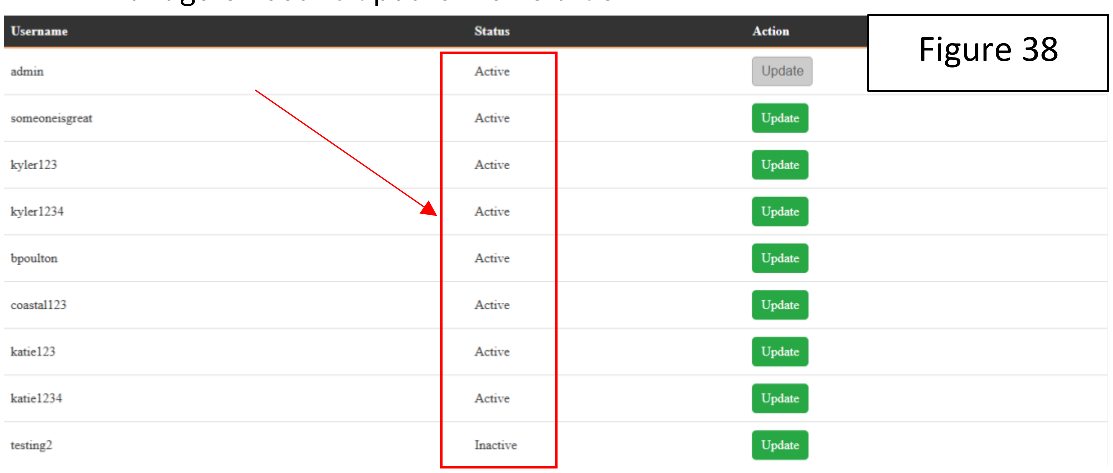
g. <u>Managing User Statuses:</u>

Managers can view and manage the status of users, whether they are *Active* or *Inactive* (See figure 38)

i. <u>Active Users:</u> These users have access to the system and can perform actions

ii. <u>Inactive Users:</u> These users do not have access to the system. To reactivate a user, managers need to update their status

Figure 38



XI. <u>Adding A New User:</u>

To add a user, navigate to the Manage Users tab in the navigation bar at the top of the page (see figure 39). On the Manage users page, there is a button labeled "Add User" (see figure 36)

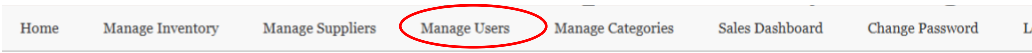


Figure 39

a. On the Add User Page (see figure 37), fill out the following form fields (all fields are required):
   i. Enter the user's unique username
   ii. Password: Enter a password for the user (must be at least 8 characters)
   iii. Admin Status: Check the box if the user should have admin privileges
b. Once all the details are entered:
   i. Click the "Create User" button to add the user to the system (see figure 37)
   ii. A confirmation message will appear if the user is successfully added (see figure 40)

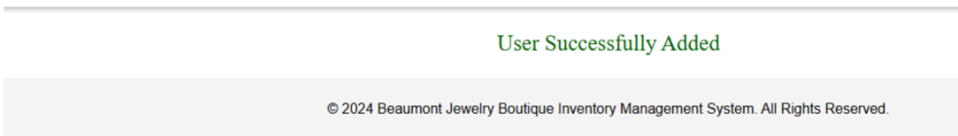
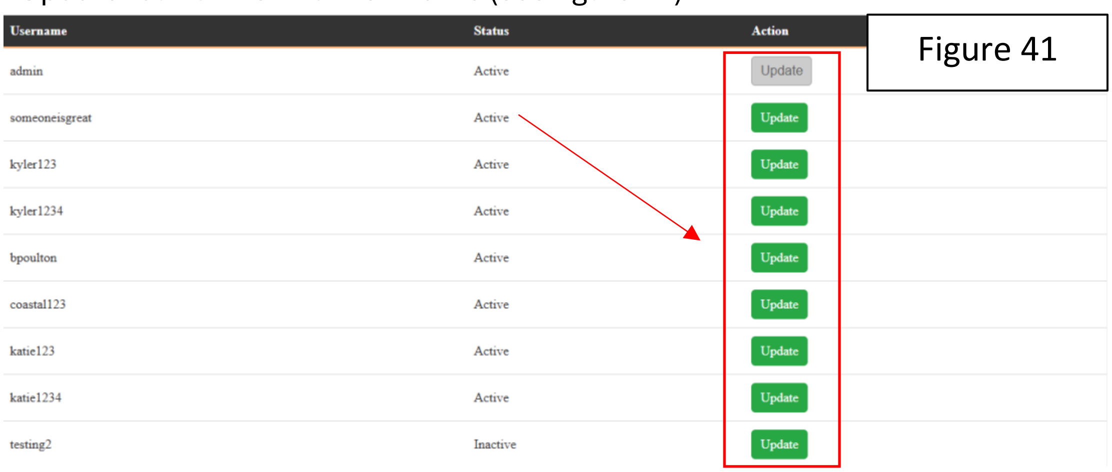


Figure 40

c. Error handling:
   i. If there are errors, such as missing fields or a duplicate username, an appropriate error message will display indicating what needs to be corrected.

XII. <u>Update User:</u>

To update a user, navigate to the Manage Users tab in the navigation bar at the top of the page (see figure 39). On the Manage Users page locate the user you want to update and click the green "Update: button next to their name (see figure 41)

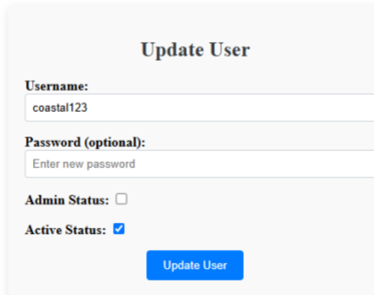


Username	Status	Action
admin	Active	Update
someoneisgreat	Active	Update
kyler123	Active	Update
kyler1234	Active	Update
bpoulton	Active	Update
coastal123	Active	Update
katie123	Active	Update
katie1234	Active	Update
testing2	Inactive	Update

Figure 41

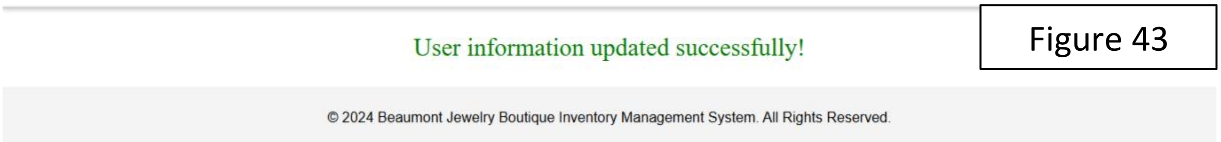
a. <u>On the Update User Page (see figure 42), fill out or update the following form fields:</u>
   i. <u>Username:</u> Edit the username as needed (username must be unique)
   ii. <u>Password:</u> (optional) Enter a new password if the user's password needs to be reset. If left blank, the password will remain unchanged
   iii. <u>Admin Status:</u> Check or uncheck the box to grant or revoke admin privileges
   iv. <u>Active Status:</u> Check or uncheck the box to set the user as active or inactive

Figure 42



b. <u>Once all the changes are made:</u>
   i. Click the "Update User" button to save the changes (see figure 42)
   ii. A confirmation message will appear if the user information is successfully updated, and the page will display the success message (see figure 43)

Figure 43



c. <u>Error Handling:</u>
   i. <u>Duplicate Username:</u> if the username already exists for another user, an error message will display. Update the username to a unique one and resubmit the form
   ii. <u>Missing Fields:</u> If required fields are left blank, an error message will display prompting you to complete the form before submission

d. <u>Self-Update Restriction:</u>
   i. You cannot update your own user account. On the Manage users page, the "Update" button for your account will be greyed out and disabled, preventing you from accessing the update form for your own user information (see figure 44). The restriction ensures system integrity by avoiding changes to the currently logged-in manager's account.

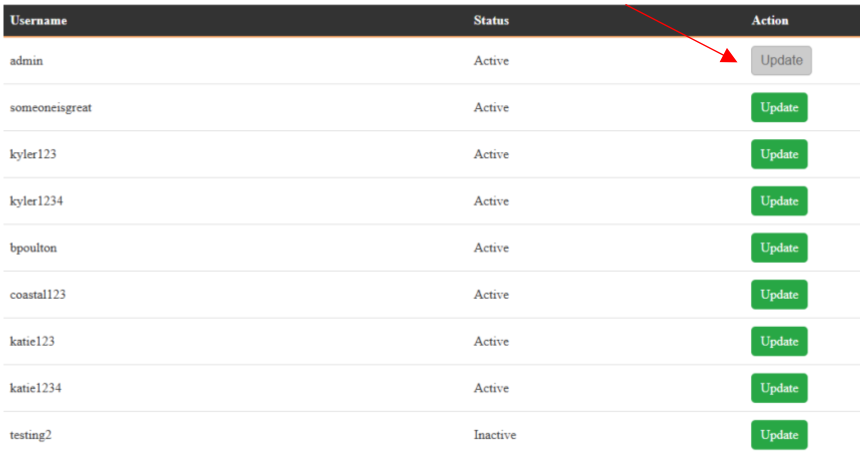


Figure 44

XIII. <u>Manage Categories:</u>

To manage categories, navigate to the Manage Categories tab in the navigation bar at the top of the page (see figure 45). The Manage Categories page allows managers to perform essential tasks related to managing product categories in the database (see figure 46). This includes adding new categories, viewing the current category list, and deleting existing categories (with restrictions on categories associated to products).

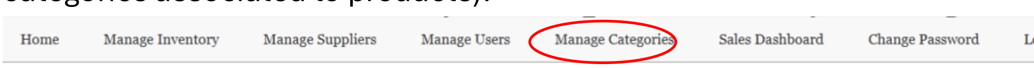


Figure 45

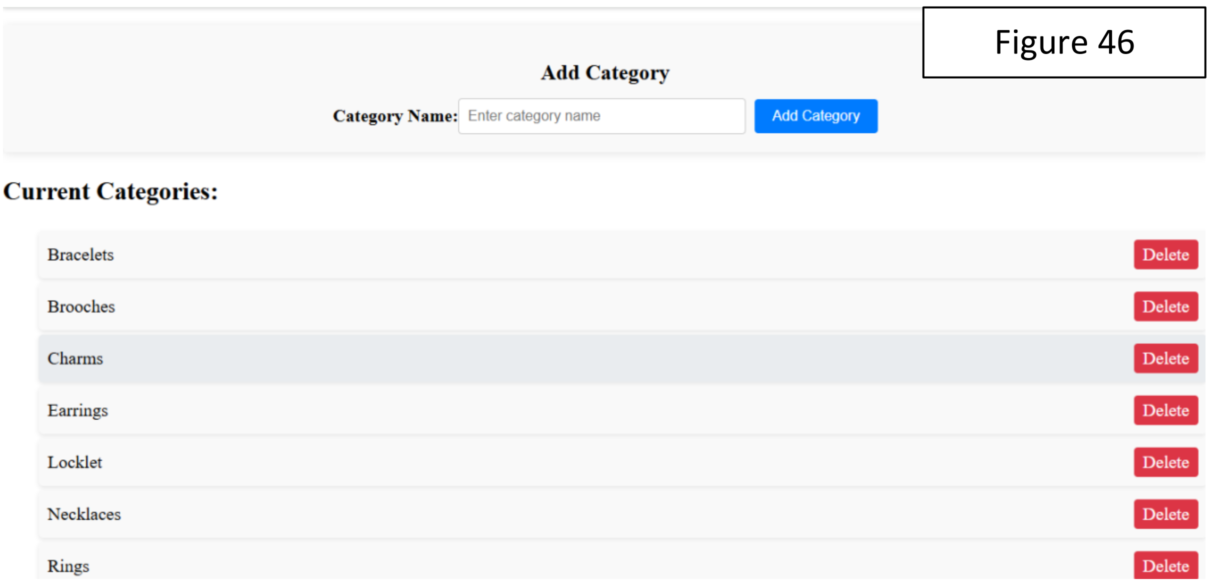


Figure 46

a. <u>Add a Category:</u>
   i. Located in the Add Category section of the page
   ii. A form enables managers to input and submit a new category. If a category already exists, an error message is displayed (see figure 47)

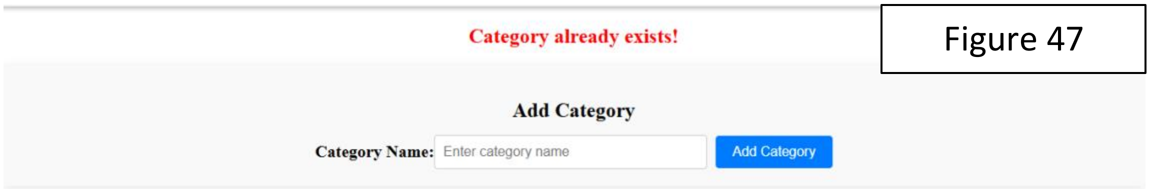


Figure 47

b. <u>Steps to Add a Category:</u>
   i. Enter the desired category name in the input field (see figure 48)
   ii. Click Add Category (see figure 48)

Figure 48

   iii. Successful addition of category is confirmed with a message: "*Category has been added!"* (see figure 49)

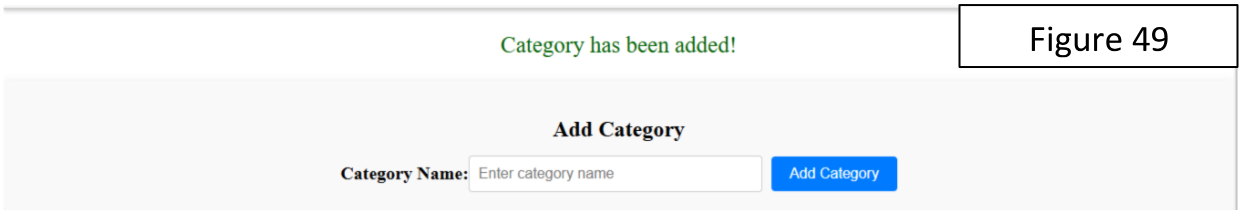


Figure 49

   iv. If the category name is empty, an error message appears: *"Category name is required!"* (see figure 50)

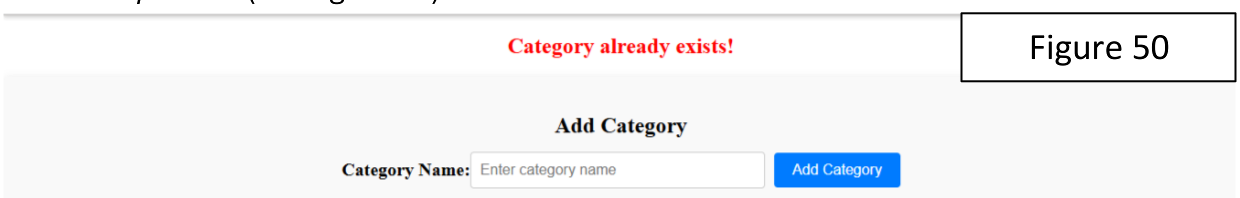


Figure 50

c. <u>View Current Categories:</u>
   i. Displays an alphabetically ordered list of all categories in the database (see figure 51)

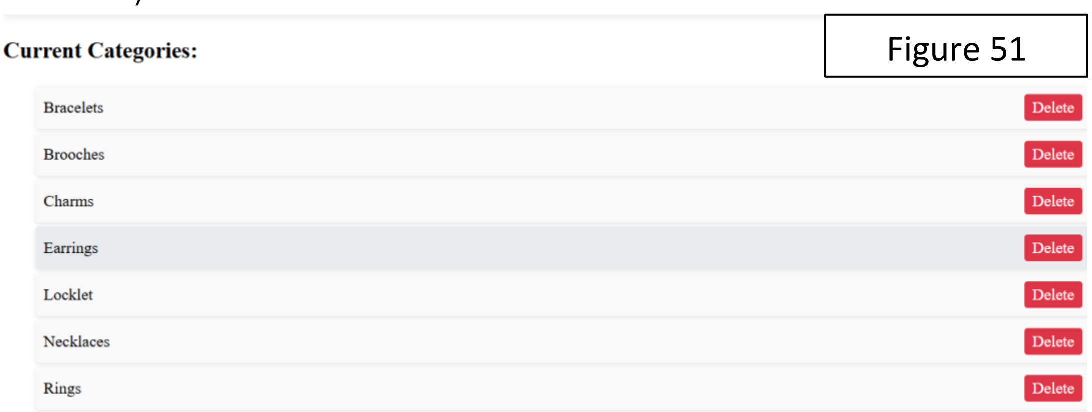


Figure 51

   ii. Each category is displayed as a list item with an option to delete

d. Delete a Category:

i. Each category in the list has a Delete button (see figure 52)

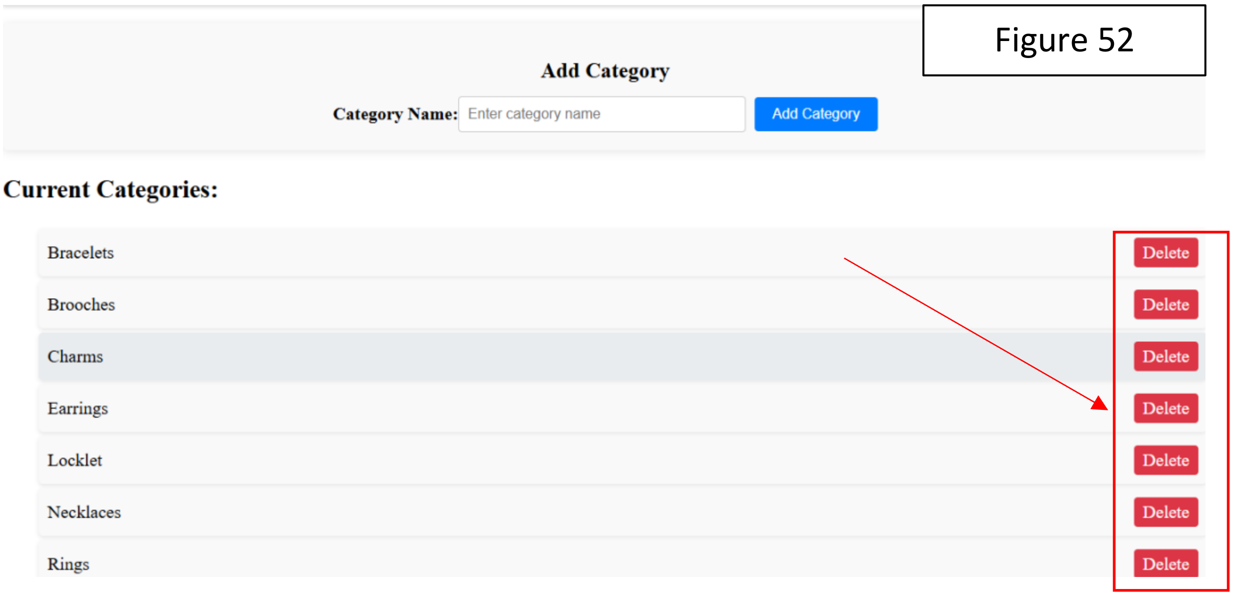


Figure 52

ii. Clicking Delete removes the category if it is not associated with any product

e. Deletion Restrictions:

i. Categories linked to products cannot be deleted. If an attempt is made, an error message appears: "You cannot delete a category that is currently associated with a product" (see figure 53)

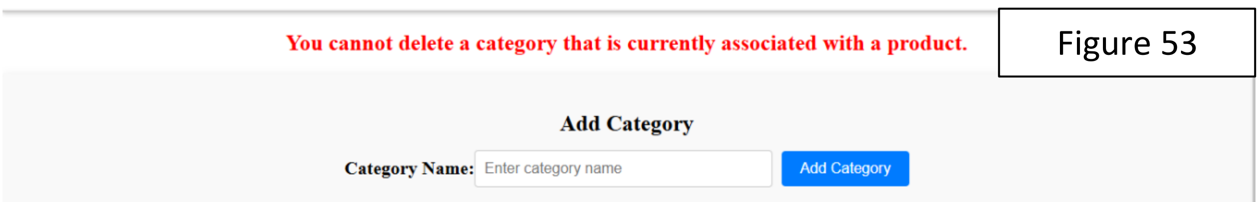


Figure 53

ii. Successful deletion is confirmed with the message "Category has been deleted!" (see figure 54)

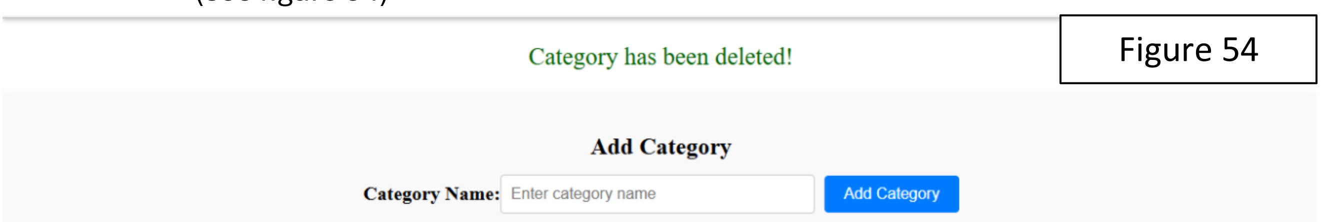
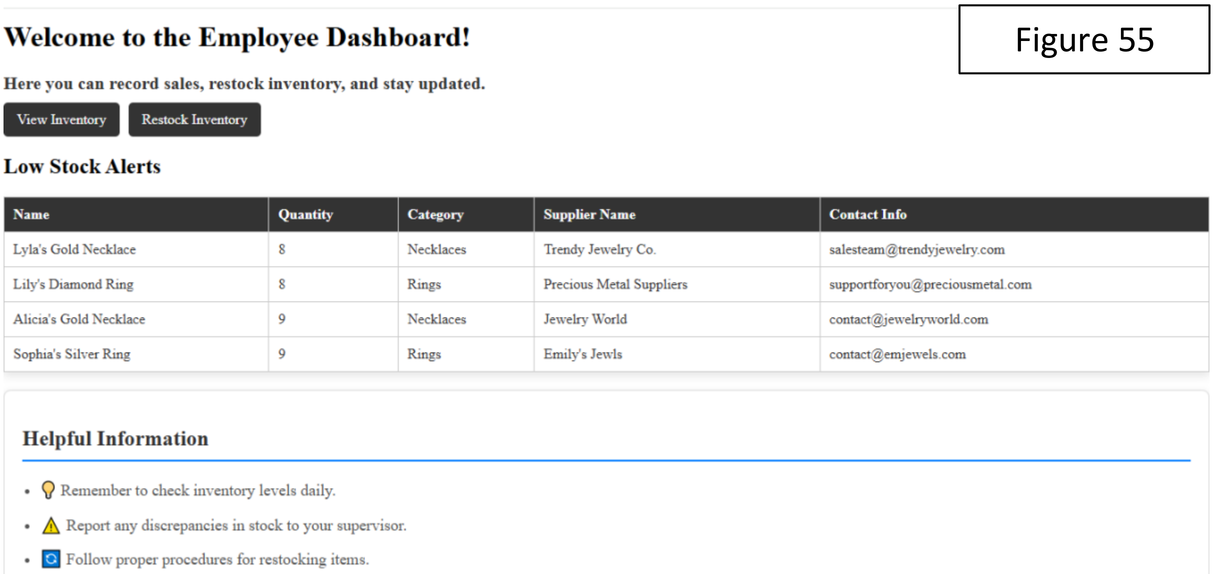


Figure 54

Section II: Employee Functions:

I. Employee Dashboard:

When a user logs in as an Employee, they are directed to the Employee Dashboard (see figure 55). The Employee Dashboard serves as a central hub for employees to manage day-to-day inventory tasks. It provides quick access to critical actions like viewing and restocking inventory and offers updates on low-stock items alongside helpful operational tips



Name	Quantity	Category	Supplier Name	Contact Info
Lyla's Gold Necklace	8	Necklaces	Trendy Jewelry Co.	salesteam@trendyjewelry.com
Lily's Diamond Ring	8	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	9	Necklaces	Jewelry World	contact@jewelryworld.com
Sophia's Silver Ring	9	Rings	Emily's Jewls	contact@emjewels.com

Figure 55

a. <u>Welcome Section (see figure 56):</u>
   i. A friendly introduction to the dashboard, highlighting its primary functions:
      1. Recording sales
      2. Restocking inventory
      3. Staying informed about stock status

Figure 56

b. <u>Employee Actions:</u>
   i. <u>View Inventory:</u>
      1. Click the View Inventory button to access a detailed list of current stock levels and item details (see figure 57)

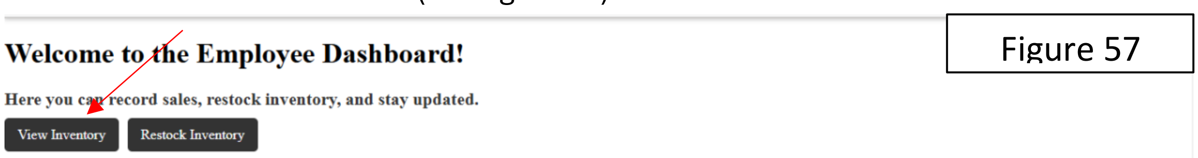


Figure 57

   ii. <u>Restock Inventory:</u>
      1. Use the Restock Inventory button to update quantities for items that are running low or out of stock (see figure 58). More details about the restock inventory function in **Section III: Shared Functions**

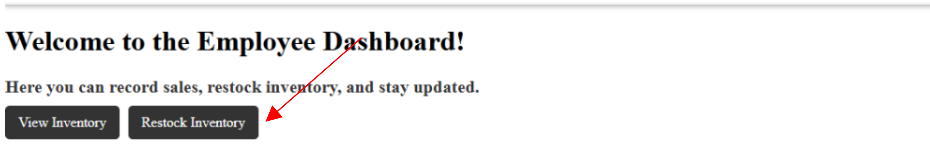


Figure 58

c. Low Stock Alerts:

Highlights items in the inventory with quantities below 10 (see figure 59)

Low Stock Alerts

Figure 59

Name	Quantity	Category	Supplier Name	Contact Info
Lyla's Gold Necklace	8	Necklaces	Trendy Jewelry Co.	salesteam@trendyjewelry.com
Lily's Diamond Ring	8	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	9	Necklaces	Jewelry World	contact@jewelryworld.com
Sophia's Silver Ring	9	Rings	Emily's Jewls	contact@emjewels.com

Displays key details for each low-stock item:

i. Name: The product name
ii. Quantity: Current stock level
iii. Category: The product category
iv. Supplier Name: Name of the supplier for replenishment
v. Contact Info: Supplier's contact details for quick communication

If no items are low in stock, the page displays: *"All items are sufficiently stocked."* (see figure 60)

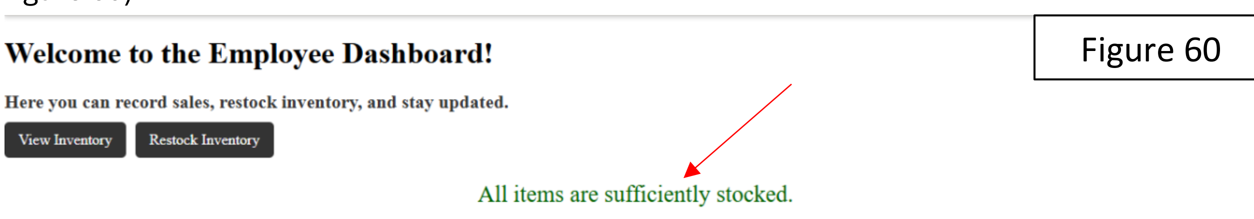


Figure 60

d. Helpful Information:

A section dedicated to best practices and reminders for inventory management. Includes tips such as (see figure 61):

i. Regularly checking stock levels
ii. Reporting discrepancies to supervisors
iii. Following restocking procedures
iv. Staying updated on policies and guidelines

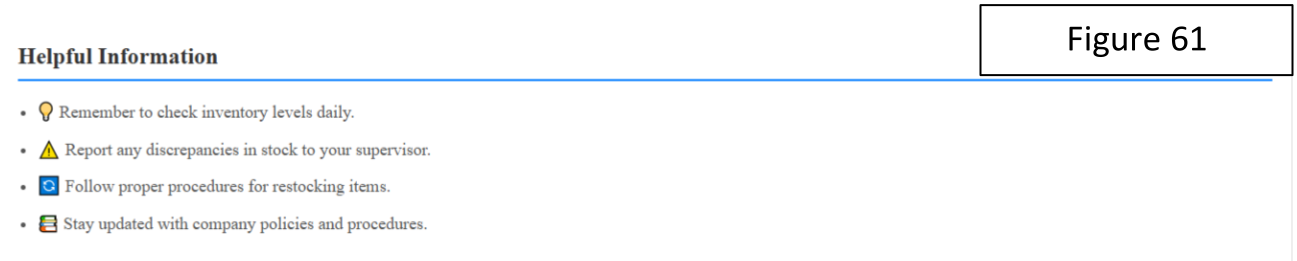


Figure 61

II. <u>View Inventory:</u>

The View Inventory page helps employees review the current stock levels and key details about inventory items. It is designed to make inventory management efficient and user friendly.

To access the View Inventory page, navigate to the View Inventory tab on the navigation bar (see figure 62)

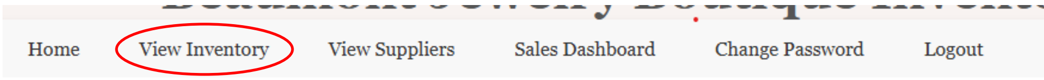


Figure 62

a. <u>Actions Section:</u>
   i. A Restock Inventory button is available at the top of the page (see figure 63)
   ii. Clicking this button takes you directly to the restocking section, where you can update stock levels for items as needed (See Section III: Shared Functions for more details on this function)

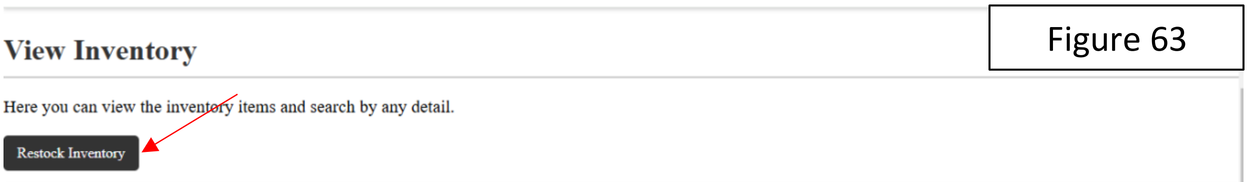
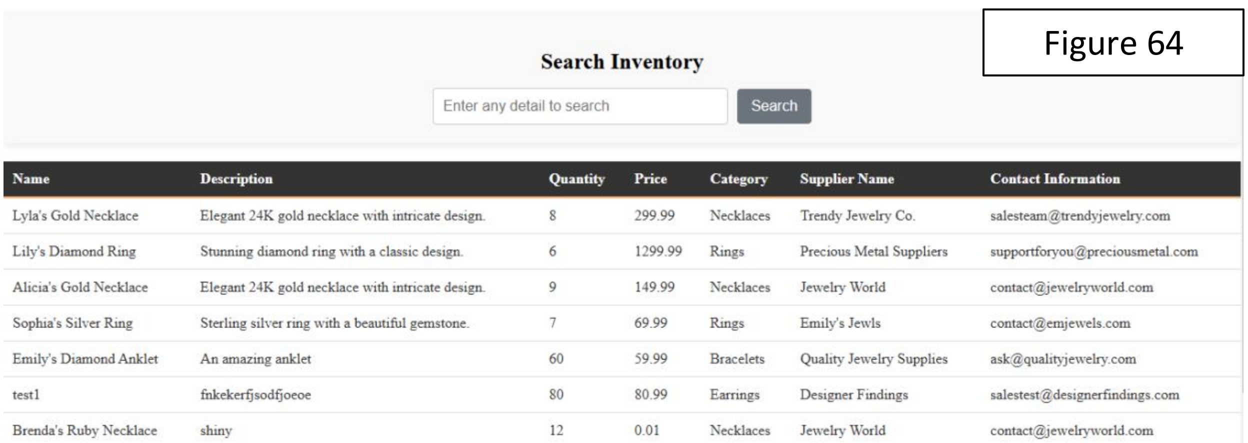


Figure 63

b. <u>Inventory Table:</u>

The main feature of the page is the inventory table, which lists all active inventory items (see figure 64). The Inventory Table features a search bar feature where more details about that function will be in <u>**Section III: Shared Functions**</u>



Name	Description	Quantity	Price	Category	Supplier Name	Contact Information
Lyla's Gold Necklace	Elegant 24K gold necklace with intricate design.	8	299.99	Necklaces	Trendy Jewelry Co.	salesteam@trendyjewelry.com
Lily's Diamond Ring	Stunning diamond ring with a classic design.	6	1299.99	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	Elegant 24K gold necklace with intricate design.	9	149.99	Necklaces	Jewelry World	contact@jewelryworld.com
Sophia's Silver Ring	Sterling silver ring with a beautiful gemstone.	7	69.99	Rings	Emily's Jewls	contact@emjewels.com
Emily's Diamond Anklet	An amazing anklet	60	59.99	Bracelets	Quality Jewelry Supplies	ask@qualityjewelry.com
test1	fnkekerfjsodfjoeoe	80	80.99	Earrings	Designer Findings	salestest@designerfindings.com
Brenda's Ruby Necklace	shiny	12	0.01	Necklaces	Jewelry World	contact@jewelryworld.com

Figure 64

Details for each item include:
   i. Name: The item's name
   ii. Description: A summary of the item's feature or purpose
   iii. Quantity: The number of items currently in stock
   iv. Price: The cost of the item
   v. Category: The category the item belongs to
   vi. Supplier Name: The supplier providing the item
   vii. Contact Information: The contact details for the supplier

III. <u>View Suppliers:</u>

The View Suppliers page enables employees to review and access essential supplier details to ensure seamless inventory management. This page is designed to provide a clear overview of all active suppliers. To access the View Suppliers page, navigate to the View Suppliers tab on the navigation bar (see figure 65)

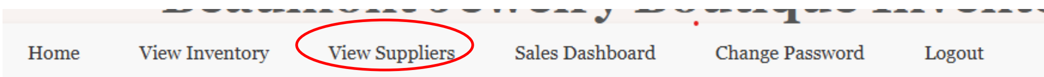


Figure 65

a. <u>Supplier Table:</u>

The main feature of the page is the supplier table, which lists all the current suppliers the boutique uses (see figure 66). The Supplier Table features a search bar feature where more details about that function will be in **<u>Section III: Shared Functions</u>**

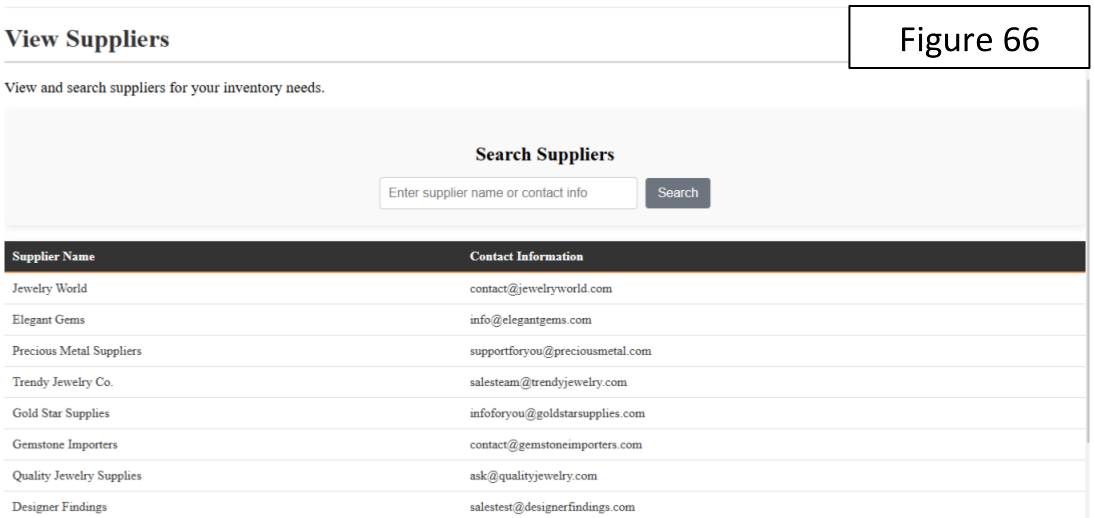


Figure 66

Details for each supplier include:

i. Name: The name of the supplier

ii. Contact Information: Relevant contact details to reach the supplier

Section III: Shared Functions:

I. <u>Login Page:</u>

The login page allows both managers and employees to securely access the system by entering their credentials (see figure 67). It ensures that only active accounts with correct login details can proceed to their respective dashboards based on their user role (admin or regular user).

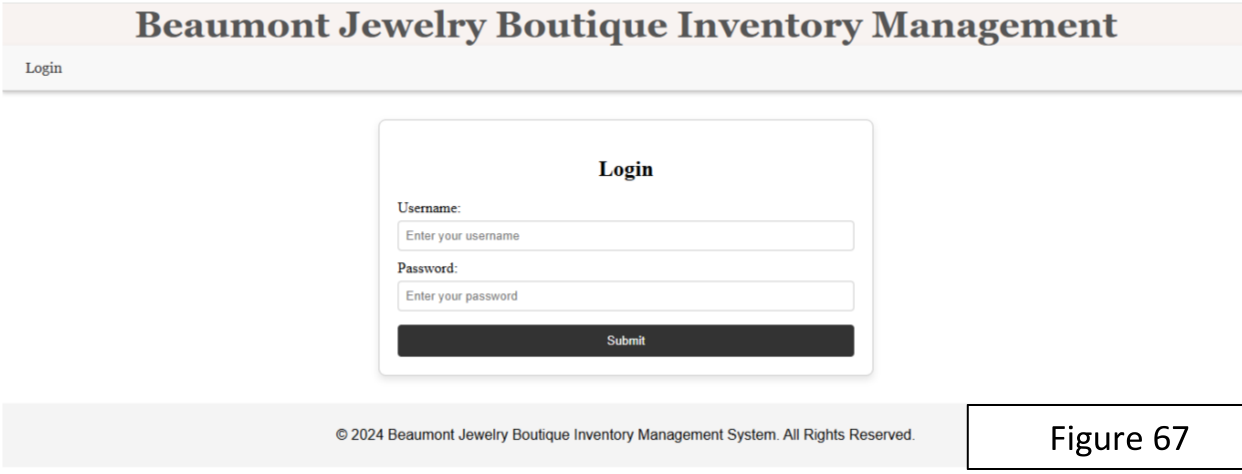


Figure 67

a. Login Form:
   i. The page provides a simple login form with fields for:
      1. Username: Enter your registered username
      2. Password: Enter the associated password for the username
   ii. Both fields are required for submission
b. Successful Login:
   Upon successful login:
   i. Managers are redirected to the Admin Dashboard (see figure 68)

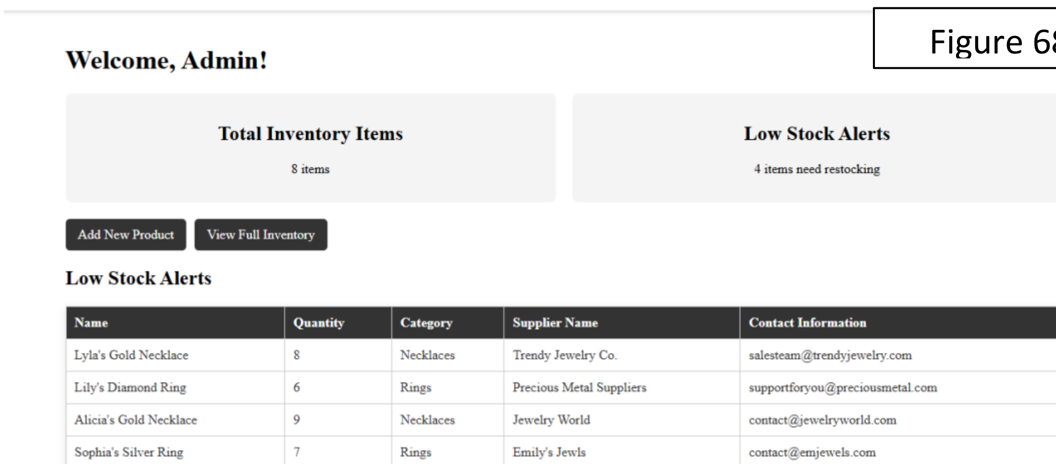
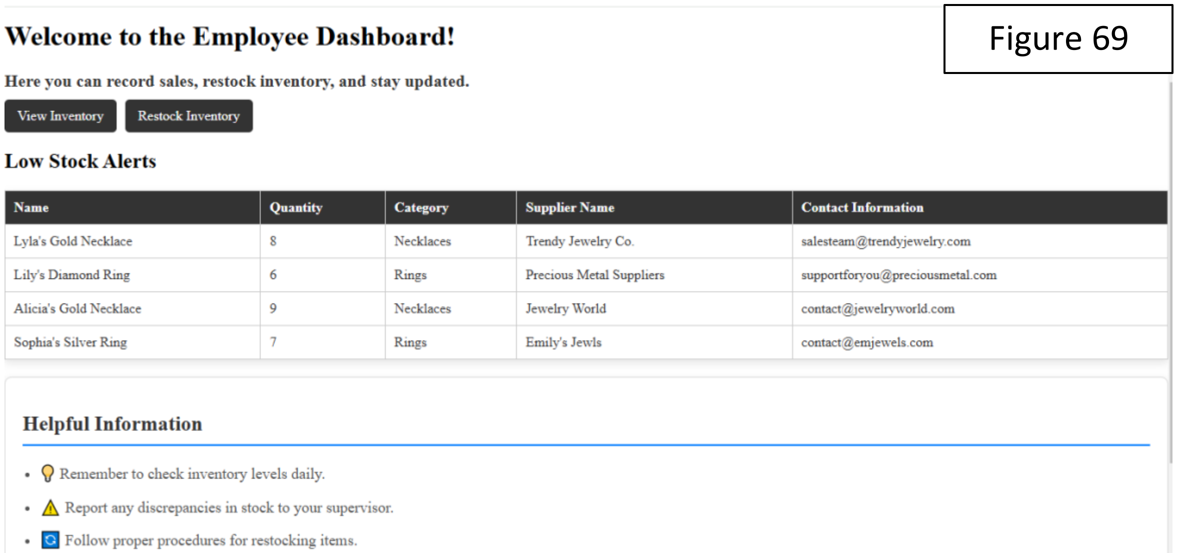


Figure 68

   ii. Employees are redirected to the User Dashboard (see figure 69)



Name	Quantity	Category	Supplier Name	Contact Information
Lyla's Gold Necklace	8	Necklaces	Trendy Jewelry Co.	salesteam@trendyjewelry.com
Lily's Diamond Ring	6	Rings	Precious Metal Suppliers	supportforyou@preciousmetal.com
Alicia's Gold Necklace	9	Necklaces	Jewelry World	contact@jewelryworld.com
Sophia's Silver Ring	7	Rings	Emily's Jewls	contact@emjewels.com

Figure 69

II. <u>Logout Page:</u>

The logout page allows both admin and regular users to securely end their session and exit the system, ensuring privacy and security for their account.

<u>How to Log Out:</u>

a. <u>Locate the Logout Button:</u>
   i. For both managers and employees, the logout is located on the far-right side of the navigation bar (see figure 70)

Figure 70

   ii. This button is only visible when you are logged in

b. <u>Click the Logout Button</u>
   i. Click the button to initiate the logout process
   ii. The system will redirect you to a confirmation page to indicate that you have successfully logged out

c. <u>Confirmation Page</u>
   i. After logging out, you will see the message:
      1. *"You have successfully been logged out"* (see figure 71)

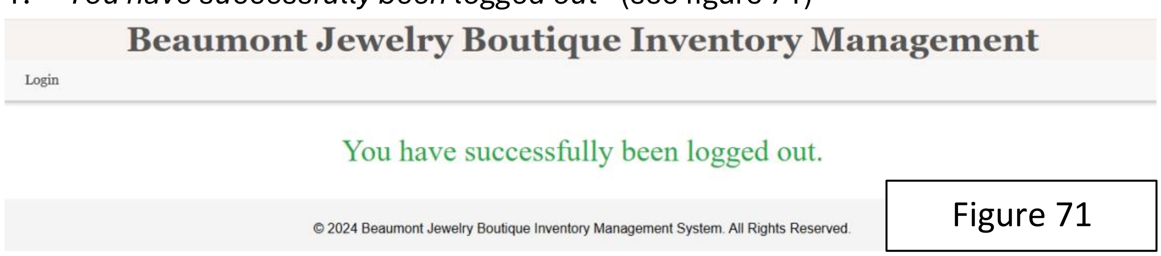


Figure 71

   ii. This confirms that your session has ended

III. <u>Search Feature:</u>

The Search Feature is designed to help users quickly locate specific information within the system. This feature is consistent across multiple pages, allowing both managers and employees to perform searches with ease.

- a. <u>Where the Search Feature is Available:</u>
  - i. <u>For Managers:</u>
    1. Manage Inventory
    2. Manage Suppliers
    3. Manage Users
  - ii. <u>For Employees:</u>
    1. View Inventory
    2. View Suppliers
- b. <u>How the Search Feature Works:</u>
  - i. <u>Locate the Search Bar:</u>
    1. Each page with a search feature includes a *clearly labeled search bar* near the top of the page (see figure 72)

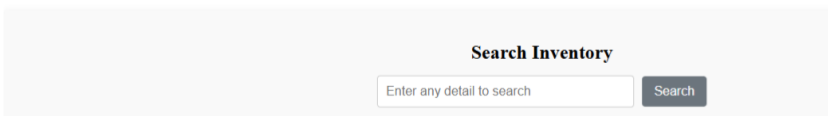


Figure 72

  - ii. <u>Enter Search Criteria:</u>
    1. Type your search term into the search bar
    2. Examples of valid search terms:
       - a. Inventory item names, IDs, or categories
       - b. Supplier names or contact details
       - c. Usernames or account information (managers only)
  - iii. <u>Execute the Search:</u>
    1. Click the search button to perform the search (see figure 73)

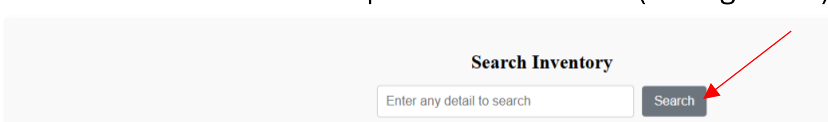


Figure 73

  - iv. <u>Review the Results:</u>
    1. A table will display the results that match your search term
    2. Results are dynamically filtered to show only the relevant entries
  - v. <u>If No Results Are Found:</u>

1. A message will appear: *"No results found for the given search term"* (see figure 74)

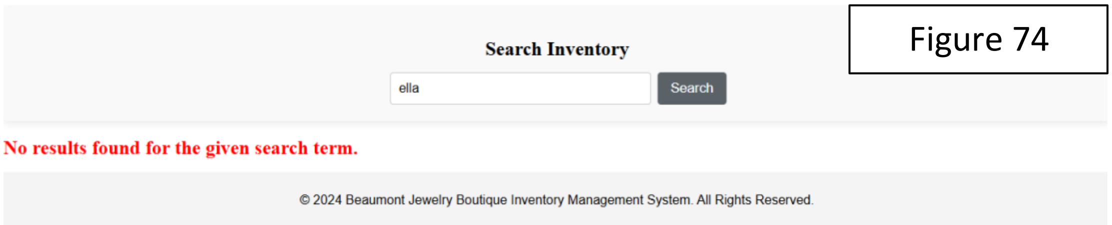
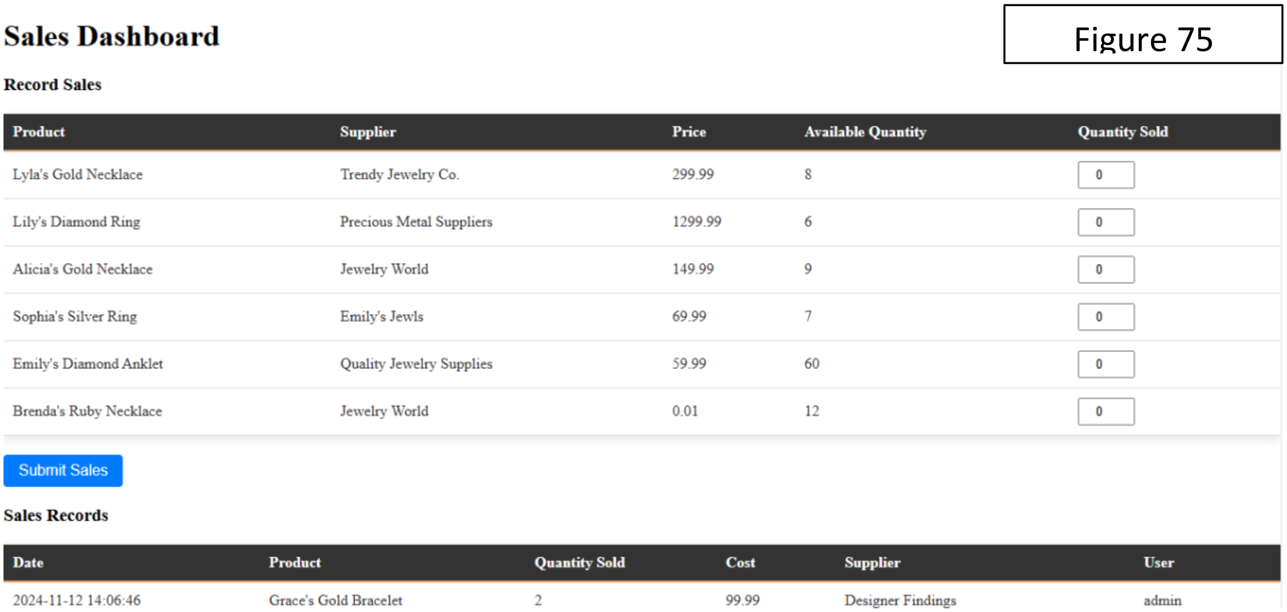


Figure 74

2. You can adjust your search and try again

IV. <u>Sales Dashboard:</u>

The Sales Dashboard allows both managers and employees to record product sales by specifying quantities sold and viewing/tracking previous sales records, including details such as the product quantity, cost, supplier, and user (see figure 75). To navigate to the sales dashboard page, press the "sales dashboard" tab in the navigation bar (see figure 76)



Sales Dashboard

Record Sales

Product	Supplier	Price	Available Quantity	Quantity Sold
Lyla's Gold Necklace	Trendy Jewelry Co.	299.99	8	0
Lily's Diamond Ring	Precious Metal Suppliers	1299.99	6	0
Alicia's Gold Necklace	Jewelry World	149.99	9	0
Sophia's Silver Ring	Emily's Jewls	69.99	7	0
Emily's Diamond Anklet	Quality Jewelry Supplies	59.99	60	0
Brenda's Ruby Necklace	Jewelry World	0.01	12	0

Submit Sales

Sales Records

Date	Product	Quantity Sold	Cost	Supplier	User
2024-11-12 14:06:46	Grace's Gold Bracelet	2	99.99	Designer Findings	admin

Figure 75

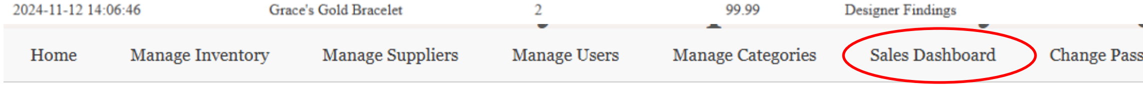


Figure 76

a. <u>Recording Sales:</u>

Allows users to log sales for products available in the inventory

<u>Steps:</u>

i. Navigate to the "Record Sales" section of the page (see figure 77)

Record Sales

Product	Supplier	Price	Available Quantity	Quantity Sold
Lyla's Gold Necklace	Trendy Jewelry Co.	299.99	8	0
Lily's Diamond Ring	Precious Metal Suppliers	1299.99	6	0
Alicia's Gold Necklace	Jewelry World	149.99	9	0
Sophia's Silver Ring	Emily's Jewls	69.99	7	0
Emily's Diamond Anklet	Quality Jewelry Supplies	59.99	60	0
Brenda's Ruby Necklace	Jewelry World	0.01	12	0

Submit Sales

Figure 77

ii. A table will display active products with the following details:
   1. Product name: The name of the item
   2. Supplier: Supplier associated with the product
   3. Price: The cost per unit of the product
   4. Available Quantity: The remaining stock for the product
   5. Quantity Sold: An input field of how many of that item was sold

iii. For each product you wish to record a sale:
   1. Enter the quantity sold in the "Quantity Sold" field (see figure 78)

Record Sales

Product	Supplier	Price	Available Quantity	Quantity Sold
Lyla's Gold Necklace	Trendy Jewelry Co.	299.99	8	0
Lily's Diamond Ring	Precious Metal Suppliers	1299.99	6	0
Alicia's Gold Necklace	Jewelry World	149.99	9	0
Sophia's Silver Ring	Emily's Jewls	69.99	7	0
Emily's Diamond Anklet	Quality Jewelry Supplies	59.99	60	0
Brenda's Ruby Necklace	Jewelry World	0.01	12	0

Submit Sales

Figure 78

iv. Click the Submit Sales button (see figure 79)

Record Sales

Product	Supplier	Price	Available Quantity	Quantity Sold
Lyla's Gold Necklace	Trendy Jewelry Co.	299.99	8	0
Lily's Diamond Ring	Precious Metal Suppliers	1299.99	6	0
Alicia's Gold Necklace	Jewelry World	149.99	9	0
Sophia's Silver Ring	Emily's Jewls	69.99	7	0
Emily's Diamond Anklet	Quality Jewelry Supplies	59.99	60	0
Brenda's Ruby Necklace	Jewelry World	0.01	12	0

Submit Sales

Figure 79

v. Confirm the submission when prompted

Outcome:

vi. If the sale is recorded successfully:
   1. The inventory stock will be updated to reflect the quantity sold
   2. A success message ("Sales record added successfully! Quantity updated") will appear (see figure 80)

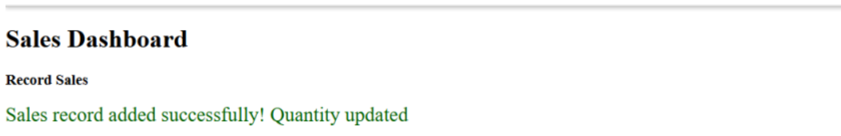
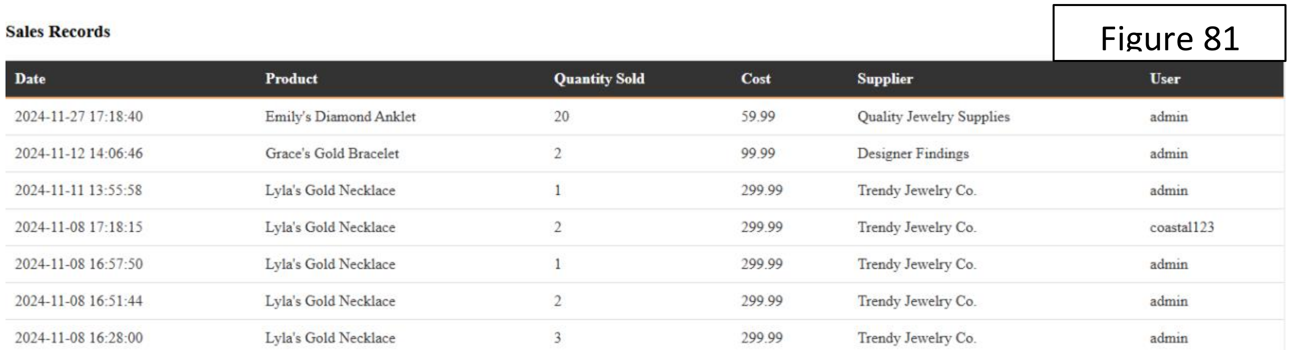


Figure 80

vii. If there is an issue (e.g., insufficient stock or invalid entry):
   1. An error message will display indicating the problem

b. Viewing Sales Records

Allows users to view a log of all recorded sales for tracking and auditing (see figure 81)



Sales Records

Date	Product	Quantity Sold	Cost	Supplier	User
2024-11-27 17:18:40	Emily's Diamond Anklet	20	59.99	Quality Jewelry Supplies	admin
2024-11-12 14:06:46	Grace's Gold Bracelet	2	99.99	Designer Findings	admin
2024-11-11 13:55:58	Lyla's Gold Necklace	1	299.99	Trendy Jewelry Co.	admin
2024-11-08 17:18:15	Lyla's Gold Necklace	2	299.99	Trendy Jewelry Co.	coastal123
2024-11-08 16:57:50	Lyla's Gold Necklace	1	299.99	Trendy Jewelry Co.	admin
2024-11-08 16:51:44	Lyla's Gold Necklace	2	299.99	Trendy Jewelry Co.	admin
2024-11-08 16:28:00	Lyla's Gold Necklace	3	299.99	Trendy Jewelry Co.	admin

Figure 81

i. Details Displayed:
   1. Date: When the sale was recorded
   2. Product: The name of the product sold
   3. Quantity Sold: The number of units sold
   4. Cost: The total cost of the transaction
   5. Supplier: Supplier providing the product
   6. User: The username of the individual who recorded the sale

ii. Sorting:
   1. Sales records are displayed in descending order by date.

V. Changing Password:

The Change Password page enables both managers and employees to securely update their account passwords. This action is critical for maintaining account security. Upon updating the password, the system logs the user out for security reasons, requiring re-login with the new credentials. To access the change password page, click the change password link in the navigation bar (see figure 82)

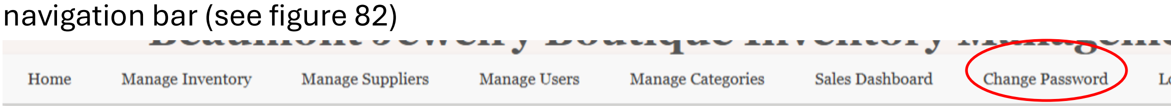


Figure 82

a. Password Update Form:

The form consists of two fields: (see figure 83)

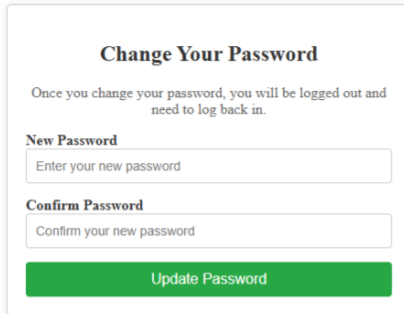


Figure 83

   i. New Password: Enter your desired password
   ii. Confirm Password: Re-enter the new password to confirm

b. Validation Checks:

   The system enforces strong password policies:

   i. Password must be between 8-72 characters
   ii. Both password fields must match
   iii. Fields cannot be left blank

c. Submit the Form:

   i. Click the Update Password button (see figure 84)

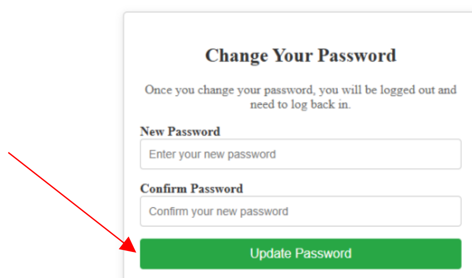


Figure 84

d. Receive Confirmation:

   i. If successful, you will be logged out automatically and a success message will appear (see figure 85)

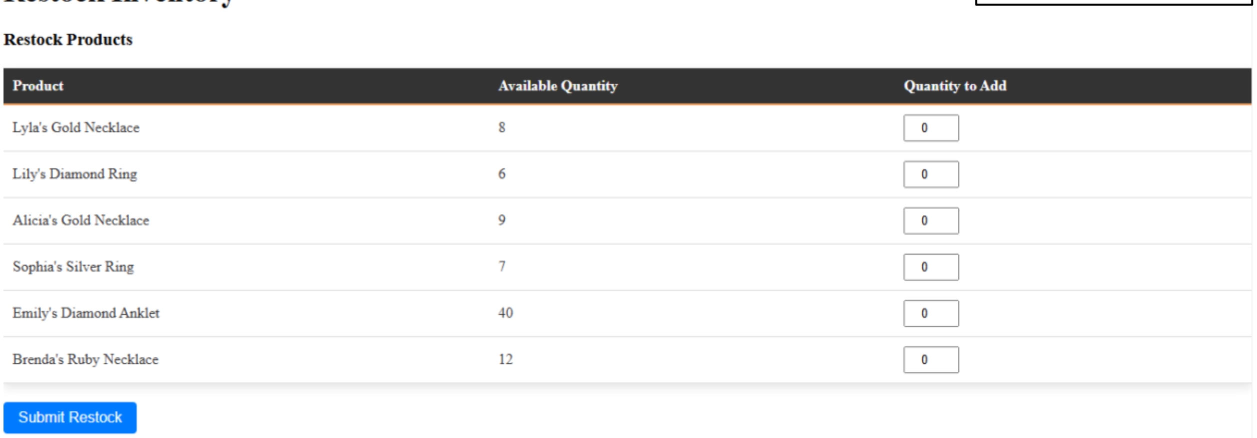
Figure 85

   ii. If unsuccessful, error messages will guide you in correcting the issue

VI. Restock Inventory:

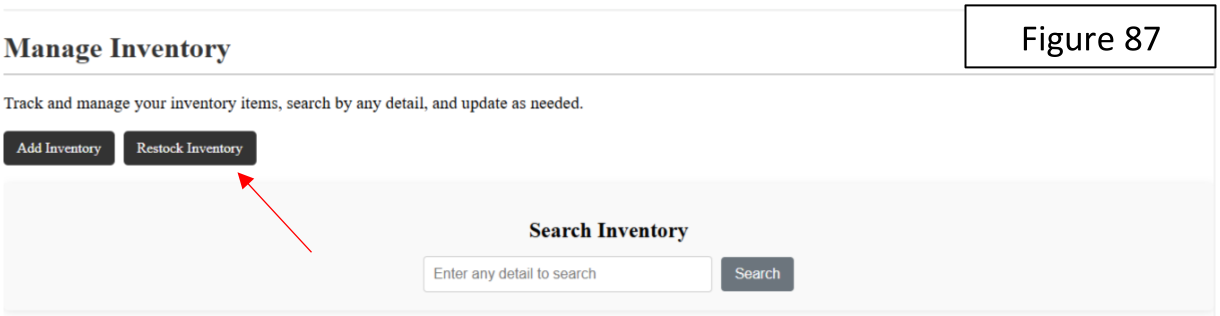
The Restock Inventory feature allows both managers and employees to update product quantities in the inventory (see figure 86). It is accessible through different pathways for admin and regular users:

Figure 86



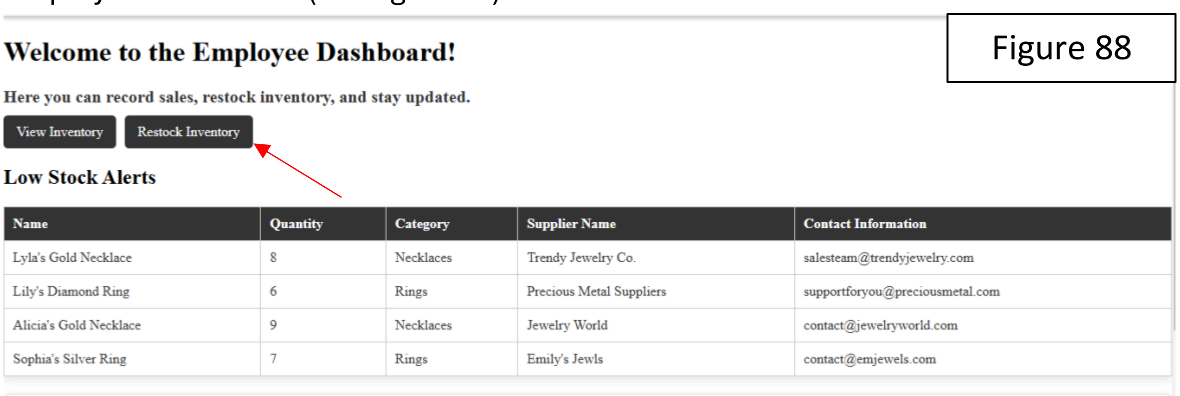
a. <u>Admin Users</u>: Access the Restock Inventory page through:
   i. Manage Inventory Page (see figure 87)

Figure 87



b. <u>Regular Users:</u> Access the Restock Inventory page through:
   i. Employee Dashboard (see figure 88)

Figure 88



   ii. View Inventory Page (see figure 89)

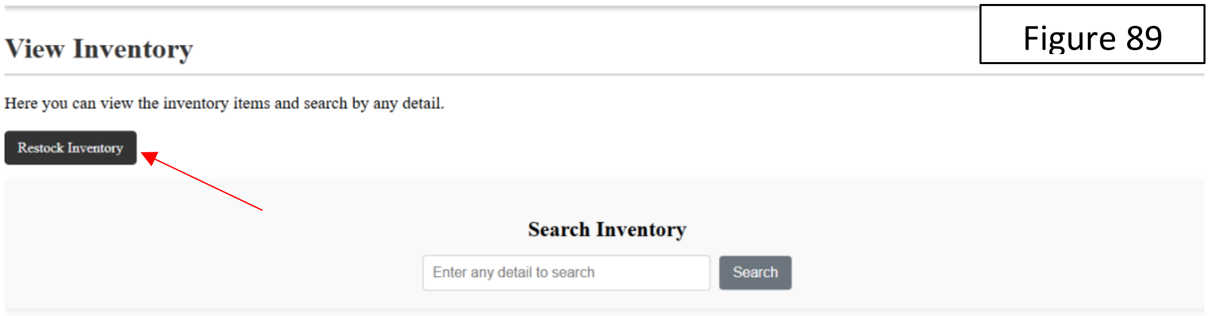


Figure 89

Each of these pages includes a Restock Inventory button located at the top

c. <u>Product List:</u>

   The page displays all active products (see figure 86), showing:

   i. Product Name
   ii. Current Available Quantity

d. <u>Filling out the Restock Inventory Form:</u>

   i. For each product, locate its row in the table
   ii. In the Quantity to Add column, enter the number of units to add
      1. Leave the field as 0 if no restocking is needed for that product (see figure 90)

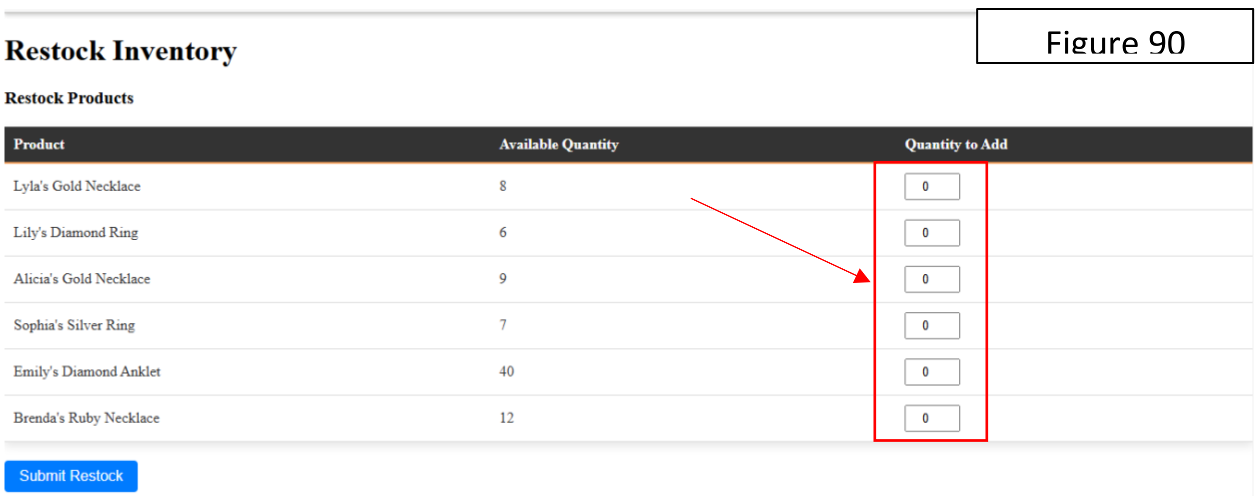
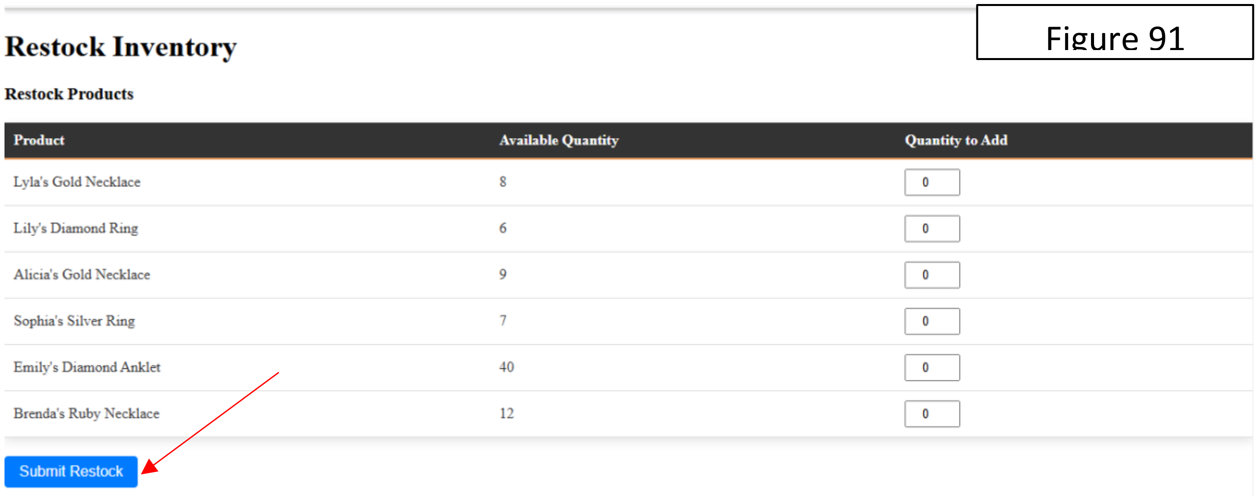


Figure 90

e. <u>Submitting the Form:</u>

   i. Click the submit restock button (see figure 91)
   ii. Confirm the submission when prompted



Restock Inventory

Restock Products

Product	Available Quantity	Quantity to Add
Lyla's Gold Necklace	8	0
Lily's Diamond Ring	6	0
Alicia's Gold Necklace	9	0
Sophia's Silver Ring	7	0
Emily's Diamond Anklet	40	0
Brenda's Ruby Necklace	12	0

Submit Restock

Figure 91

f. Verifying Success:
   i. If successful, a confirmation message ("Inventory updated successfully!") will appear (see figure 92)
   ii. The system updates the inventory immediately

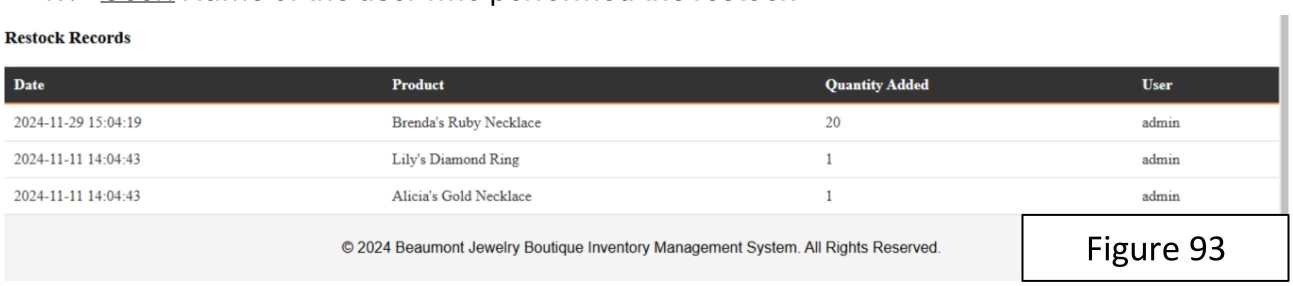
Restock Inventory

Restock Products

Inventory updated successfully!

Figure 92

g. Restocking Inventory:
The Restock Records section displays (see figure 93):
   i. Date: When the restock occurred
   ii. Product: Name of the restocked product
   iii. Quantity Added: Amount restocked
   iv. User: Name of the user who performed the restock



Restock Records

Date	Product	Quantity Added	User
2024-11-29 15:04:19	Brenda's Ruby Necklace	20	admin
2024-11-11 14:04:43	Lily's Diamond Ring	1	admin
2024-11-11 14:04:43	Alicia's Gold Necklace	1	admin

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Figure 93

SPECIFIC USE OF THE SYSTEM:

Create separate sections devoted to the needs of specific audiences. *The audiences and their needs should have been identified specifically in the introduction, allowing each user to identify the sections of interest. To avoid redundancy where the General Use of the System already covers functionality, you can identify preliminary information for instructions shall include the following:*

— A brief overview of the purpose of the procedure and definitions or explanations of necessary concepts not elsewhere included
— Identification of technical or administrative activities that must be done before starting the task
— A list of materials the user will need to complete the task, which may include data, documents, passwords,
additional software, and identification of drivers, interfaces, or protocols
— Expected errors

Section IV: Administrative Needs:

I. Admin Dashboard:
   a. Identification of Technical or Administrative Activities:
      i. Access Requirements:
         Ensure the user is logged in as an admin to access the Admin Dashboard. Non-admin users cannot view this page
      ii. Prepare Resources:
         Have a stable internet connection and a web browser to access the system. No additional software installation is needed
      iii. Verify Database Availability:
         Confirm the database server is running and accessible to fetch real-time inventory data
      iv. Understand System Features:
         Familiarize with the dashboard sections:
         1. Total Inventory Overview: Displays the total number of items in the inventory
         2. Low Stock Alerts: Highlights items that need restocking
         3. Quick Actions: Links to add new products or manage existing inventory
   b. Materials Needed:
      i. Admin login credentials
      ii. Suppliers contact details for low-stock items (displayed on the dashboard)
      iii. Product categories and inventory details for reviewing stock levels
   c. Expected Errors:
      i. Login Issues:
         1. If you are not logged in as an admin, the system will restrict access. Ensure proper credentials are used
      ii. Database Connection Issues:
         1. If the database is unavailable, sections like “Total Inventory Items” and “Low Stock Alerts” will not load or display incorrect data

iii. Incorrect Data Display:
   1. If product details, such as supplier contact information, are missing in the database, some fields may appear blank

iv. Network Errors:
   1. A poor internet connection may prevent the page from loading properly

v. Session Timeout:
   1. If your session times out, the system may require you to log in again to continue accessing admin features

vi. Permission Errors:
   1. Non-admin users attempting to access this page will be denied

II. Manage Inventory Page:

a. Identification of Technical or Administrative Activities:

i. Access Requirements:
   1. The user must log in as an admin to access the “Manage Inventory” page

ii. Prepare Resources:
   1. A list of items currently in inventory to cross-reference data
   2. Knowledge of any recent inventory changes, such as restocking or discontinued items

iii. Understand System Features:
   1. Search Functionality: Use the search bar to find items by any detail, including name, description, price, or category
   2. Inventory Table: View detailed inventory information, including quantity, price, supplier, and status
   3. Item Actions: Update or delete inventory items using the provided links

b. Materials Needed:

i. Admin login credentials

ii. Updated inventory details for accurate data validation

iii. Supplier information to verify or update linked details

iv. Instructions on categorizing active and inactive items (see Section I: Administrative Functions)

c. Expected Errors:

i. No Results Found:
   1. If a search term does not match any item in the inventory, a “No results found” message will display

ii. Search Functionality Issues:
   1. Incorrect or incomplete search terms may return fewer or no results. Ensure accurate input

iii. Data Display Errors:

1. Items with missing database fields, such as category or supplier, may cause blank entries

iv. Session Timeout:

1. If the user's session times out, they must log in again to access this page

v. Permission Errors:

1. Non-admin users attempting to access this page will be denied

vi. Database Connectivity Issues:

1. If the database is offline, the inventory table will not load, and search results will fail.

III. Add Inventory Page:

a. Identification of Technical or Administrative Activities:

i. Access Requirements:

1. The user must log in as an admin to access the "Add Inventory" page

ii. Prepare Resources:

1. A list of current inventory items to prevent duplicates
2. Information about categories and suppliers to correctly link new items
3. Knowledge of the inventory structure, such as required fields (e.g., quantity, price, etc.)

iii. Understand System Features:

1. Add Inventory Form: Input all required details, including name, description, quantity, price, category, and supplier
2. Category and Supplier Dropdowns: Use pre-loaded options to link new inventory items accurately
3. Submit Button: Saves the new item to the system
4. Error Messages: Displays if required fields are left empty or invalid data is entered

b. Materials Needed:

i. Admin login credentials

ii. Information on the new inventory items (e.g., name, description, quantity, price).

iii. Supplier details to ensure accurate assignment

iv. Category details for proper classification

c. Expected Errors:

i. Missing or Invalid Fields:

1. If required fields are blank or invalid, an error message will be displayed

ii. Category or Supplier Not Found:

1. If a category or supplier is missing from the dropdown list, the item cannot be saved

iii. Duplicate Items:

1. Attempting to add an inventory item that already exists may result in an error

iv. Session Timeout:
   1. If the user's session expires, they must log in again to access the page

v. Database Connectivity Issues:
   1. If the database if offline, new items cannot be saved

vi. Permission Errors:
   1. Non-admin users attempting to access this page will be denied

IV. Update Inventory Page:

a. Identification of Technical or Administrative Activities:

i. Access Requirements:
   1. The user must log in with admin credentials to access the "Update Inventory" page

ii. Proper Resources
   1. A list of current inventory items which item requires updating
   2. Access to the current categories and suppliers linked to the inventory item for accurate updates
   3. Knowledge of the inventory

iii. Understand System Features
   1. Preloaded Form: The form displays the current details of the selected inventory item
   2. Editable Fields: Allows modifications to item name, description, quantity, price, category, and supplier
   3. Submit Button: Saves the changes made to the inventory item
   4. Error Messages: Displays if the user fails to enter valid data

b. Materials Needed:

i. Admin login credentials

ii. Information about the inventory item to be updated (e.g., current name, description, quantity, price)

iii. Details about the new updates for the item (e.g., updated category or supplier)

iv. Access to the inventory system's categories and suppliers lists for validation

v. Pre-determined guidelines for setting status (e.g., active, inactive).

c. Expected Errors:

i. Missing or Invalid Fields:
   1. If required fields such as name or quantity are blank or invalid, an error message will prompt the user to correct the input

ii. Category or Supplier Not Found:

1. If a selected category or supplier is missing or deleted, the system will prevent updates until valid options are chosen

iii. Duplicate Items:
    1. Attempting to update an item's name to one that matches an existing inventory record may result in a duplication error

iv. Session Timeout:
    1. If the user's session expires during the update process, they must log in again and re-enter their updates

v. Database Connectivity Issues:
    1. If the database is offline or unresponsive, changes cannot be saved, and the user will be prompted to retry later

vi. Permission Errors:
    1. If a non-admin user attempts to access or use this page, access will be denied

V. Delete Inventory Page:
  a. Identification of Technical or Administrative Activities:
    i. Access Requirements:
      1. The user must login with admin credentials to access the "Delete Inventory Item" page
    ii. Prepare Resources:
      1. Knowledge of the item to be deleted
      2. Verify that no sales record exists for the inventory item to ensure deletion is allowed
    iii. Understand System Features:
      1. Item Deletion Warning: Displays a confirmation message asking if the user is sure they want to delete the inventory item
      2. Error Handling: If there are associated sales records, the deletion is blocked, and a message is displayed to the user with instructions for deactivating the item
      3. Deletion Confirmation: After successful deletion, a message is shown confirming the item has been removed from the itinerary
  b. Materials Needed:
    i. Admin login credentials
    ii. Inventory ID and item name for the item to be deleted
    iii. Access to sales data to verify no sales records exist for the item
  c. Expected Errors:
    i. Sales Record Exists:

1. If there is an associated sales record for the inventory item, the system will prevent deletion and display an error message
2. The user is instructed to mark the item as inactive via the "Update Inventory" page instead

ii. Item Not Found:
1. If the inventory item does not exist in the database (due to an invalid ID or deletion), an error message will be displayed

iii. Permission Errors:
1. If a non-admin user attempts to access or use this page, access will be denied

iv. Session Timeout:
1. If the user's session expires during the deletion process, they must log in again to proceed.

v. Database Connectivity Issues:
1. If the database is offline or unresponsive, deletion will fail, and the user will be prompted to retry later.

VI. Manage Suppliers Page:

a. Identification of Technical or Administrative Activities

i. Access Requirements
1. The user must log in with admin credentials to access the "Manage Suppliers" page.

ii. Prepare Resources
1. Knowledge of the supplier information, including name and contact details, for managing suppliers.
2. Supplier list in the system to ensure data is up-to-date and can be modified as needed.

iii. Understand System Features
1. Search Suppliers: Users can search for suppliers based on the supplier ID, name, or contact information.
2. Add Supplier: A button is provided for adding a new supplier to the database.
3. Manage Suppliers: Options to update or delete existing supplier information.
4. Results Display: A table that displays suppliers' names, contact info, and management options (update or delete).
5. Error Handling: A message is displayed if no suppliers match the search term or if no results are found.

b. Materials Needed

i. Admin login credentials.

ii. Supplier details (e.g., name, contact info) for managing or adding new suppliers.

iii. Supplier IDs for updating or deleting specific suppliers.

c. Expected Errors:
   i. No Results Found:
      1. If no suppliers match the search term, a message is displayed: "No results found for the given search term."
   ii. Invalid Supplier ID:
      1. If a supplier ID is not found during the update or delete process, the user will be informed that the supplier does not exist.
   iii. Permission Errors:
      1. Non-admin users trying to access the supplier management page will be denied access.
   iv. Session Timeout:
      1. If the user's session expires, they will be prompted to log in again to access the page.
   v. Database Connectivity Issues:
      1. If there is an issue with the database connection, the system may fail to display supplier information or allow updates/deletes.

VII. Add Supplier Page:
   a. Identification of Technical or Administrative Activities
      i. Access Requirements:
         1. The user must be logged in with admin credentials to access the "Add Supplier" page.
      ii. Prepare Resources:
         1. The user must have the supplier's name and contact information ready for entry into the system.
         2. Ensure that the supplier's name does not already exist in the database to avoid duplicates.
      iii. System Features:
         1. Form Submission: The page contains a form for entering supplier details, including name and contact information.
         2. Validation: The system checks that the name is not empty and that the contact information is provided. If a supplier already exists with the same name, it will display an error message.
         3. Error Handling: If the form is submitted with missing or invalid information, error messages will guide the user to correct the input.
      iv. Form Structure:
         1. Supplier Name: A required text field for entering the supplier's name.

2. <u>Supplier Contact:</u> A required text field for entering the contact information of the supplier.

v. <u>Success Messages:</u>

1. After successfully adding a supplier, a confirmation message "Supplier Successfully Added" will be shown.

b. <u>Materials Needed</u>

i. Admin login credentials.

ii. Supplier name and contact information for the new entry.

c. <u>Expected Errors:</u>

i. <u>Missing Supplier Information:</u>

1. If the supplier's name or contact information is missing, an error message will indicate the missing field.

ii. <u>Duplicate Supplier:</u>

1. If a supplier with the same name already exists in the system, an error will notify the user that the supplier's name is already taken.

iii. <u>Submission Errors:</u>

1. If there is an issue while inserting the supplier into the database, the system will display an error: "There was an error adding the supplier."

iv. <u>Validation Errors:</u>

1. When the form is not filled out correctly, the user will be prompted to make changes and resubmit the form.

v. <u>Permission Errors:</u>

1. Non-admin users trying to access the supplier management page will be denied access.

vi. <u>Session Timeout:</u>

1. If the user's session expires, they will be prompted to log in again to access the page.

vii. <u>Database Connectivity Issues:</u>

1. If there is an issue with the database connection, the system may fail to display supplier information or allow updates/deletes

VIII. <u>Update Suppliers Page:</u>

a. <u>Identification of Technical or Administrative Activities</u>

i. <u>Access Requirements:</u>

1. The user must be logged in with admin credentials to access the "Update Supplier" page.

ii. <u>Proper Resources:</u>

1. <u>Current Inventory List:</u>

a. A list of existing inventory items will be displayed on the manage inventory page, showing which items can be updated.

2. Categories and Suppliers Information:
    a. Access to the current categories and suppliers linked to inventory items is necessary to ensure correct updates.
3. Knowledge of Inventory:
    a. The user should have familiarity with the inventory system, including item names, descriptions, quantities, and the relationships between categories and suppliers.

iii. Understand System Features:

1. Preloaded Form:
    a. The form will automatically display the current details of the selected inventory item for updating.
2. Editable Fields:
    a. The user can modify fields including the item name, description, quantity, price, category, and supplier.
3. Submit Button:
    a. Once updates are made, the user clicks the submit button to save the changes to the inventory system.

b. Materials Needed:

i. Admin Login Credentials:

1. To authenticate and access the page.

ii. Current Inventory Details:

1. The admin must have knowledge of the item's existing details (e.g., name, description, quantity, price).

iii. Updated Information:

1. The updated values for the item (e.g., new category, supplier, or price).

iv. Categories and Suppliers Lists:

1. Access to these lists is essential for validation during the update process.

c. Expected Errors:

i. Missing or Invalid Fields:

1. If required fields like name or quantity are left blank or entered incorrectly, the system will display an error message prompting correction.

ii. Category or Supplier Not Found:

1. If the selected category or supplier does not exist or has been deleted, the system will prevent updates until valid options are selected.

iii. Duplicate Items:

1. Attempting to update an item's name to one that already exists in the inventory may result in a duplication error.

iv. <u>Session Timeout:</u>

1. If the user's session expires during the update process, they will need to log in again and re-enter their updates.

v. <u>Database Connectivity Issues:</u>

1. In case of database issues (e.g., the database is offline), the system will not allow updates and will prompt the user to retry later.

vi. <u>Permission Errors:</u>

1. Non-admin users attempting to access the update page will be denied permission.

IX. <u>Delete Suppliers Page:</u>

a. <u>Identification of Technical or Administrative Activities:</u>

i. <u>Access Requirements:</u>

1. The user must log in with admin credentials to access the "Delete Supplier" page

ii. <u>Proper Resources:</u>

1. <u>Supplier Details:</u>
    a. Access to the supplier list to determine which supplier is to be deleted
2. <u>Linked Inventory Items:</u>
    a. A check for any inventory items associated with the supplier is required. If such items exist, they must be reassigned or deleted prior to removing the supplier.
3. <u>Database Connection:</u>
    a. The system requires a stable connection to the database to verify supplier details and execute deletions.

iii. <u>Understand System Features:</u>

1. <u>Confirmation Prompt:</u>
    a. The system displays a prompt asking the user to confirm the deletion of a supplier.
2. <u>Error Handling for Linked Items:</u>
    a. If the supplier has associated inventory items, the system will show an error and prevent deletion until those items are handled.
3. <u>Delete Button:</u>
    a. After confirmation, the admin clicks the DELETE button to remove the supplier.
4. <u>Back to Supplier Management Link:</u>

a. A quick link is provided to return to the "Manage Suppliers" page for further actions.

b. Materials Needed:
   i. Admin Login Credentials:
      1. To authenticate and access the page.
   ii. Supplier Information:
      1. The name and details of the supplier being deleted.
   iii. Inventory List:
      1. To identify and address any associated items linked to the supplier.
   iv. Reassignment Plan:
      1. A plan to reassign or delete inventory items tied to the supplier (if any).
c. Expected Errors:
   i. Associated Inventory Items:
      1. If the supplier has linked inventory items, the system will display: *"Error: Cannot delete supplier with associated inventory items. Please delete or reassign these items first."*
   ii. Supplier Not Found:
      1. If the supplier record does not exist in the system, an error message will display:
         "Error: Supplier not found."
   iii. Session Timeout:
      1. If the admin's session expires, they must log back in to access the delete functionality again.
   iv. Database Connectivity Issues:
      1. If the database is offline or unresponsive, the deletion process will fail, and the user must try again later.
   v. Permission Errors:
      1. Non-admin users attempting to access this page will be denied.

X. Manage Users Page:
   a. Identification of Technical or Administrative Activities:
      i. Access Requirements:
         1. The user must log in with admin credentials to access the "Manage Users" page
      ii. Proper Resources:
         1. Database Connection:
            a. The system requires a stable connection to fetch user data and execute updates.
         2. User Account Information:

a. Access to the list of existing user accounts, including their usernames, IDs, and active status.

3. Search Functionality:
   a. A search box to filter users by their username.

iii. Understand System Features:
1. View User List:
   a. Displays all users, including their usernames and active/inactive status.
2. Add User Button:
   a. Provides a link to a separate page for adding a new user.
3. Search Users:
   a. Allows filtering by username using a search input field.
4. Update User Option:
   a. Each user (except the logged-in admin) has an “Update” link to modify their details.
5. Current User Restrictions:
   a. Prevents the logged-in admin from updating their account to avoid conflicts.

b. Materials Needed:
i. Admin Login Credentials:
1. To authenticate and access the page.

ii. Search Criteria:
1. The username or partial username to locate specific users.

iii. User Update Guidelines:
1. Pre-determined rules for modifying user accounts (e.g., activation, deactivation).

c. Expected Errors:
i. No Search Results:
1. If no users match the search term, the system will display: *“No results found for the given search term.”*

ii. Permission Errors:
1. Non-admin users attempting to access this page will be denied.

iii. Session Timeout:
1. If the admin’s session expires, they must log back in to access this functionality again.

iv. Database Connectivity Issues:
1. If the database is offline or unresponsive, the user list cannot be loaded, and an error message will prompt the user to retry later.

XI. Add User Page:
   a. Identification of Technical or Administrative Activities:
      i. Access Requirements:
         1. The user must be logged in with admin credentials to access the "Add Supplier" page
      ii. Prepare Resources:
         1. Supplier Details:
            a. Access to the supplier's name and contact information is required for entry
      iii. Understand System Functionality:
         1. Form Submission:
            a. A form is provided to enter details for the new supplier, including:
               i. Supplier Name (required)
               ii. Supplier Contact Information (required)
         2. Duplicate Check:
            a. The system checks if a supplier with the same name already exists in the database and prevents duplicate entries.
         3. Validation:
            a. Ensures both name and contact fields are completed before submission.
         4. Confirmation Message:
            a. Upon successful addition of a supplier, a message: "Supplier Successfully Added" is displayed.
   b. Materials Needed:
      i. Admin Login Credentials
      ii. Supplier Information to create the new supplier
   c. Expected Errors:
      i. Missing Supplier Information:
         1. If the name or contact information is incomplete:
            a. Error message: "Please complete all required fields."
      ii. Duplicate Supplier:
         1. If a supplier with the same name exists in the database:
            a. Error message: "Supplier name already exists."
      iii. Permission Errors:
         1. Non-admin users attempting to access this page will be denied.
      iv. Session Timeout:
         1. If the admin's session expires, they must log back in to access this functionality again.

v. Database Connectivity Issues:
   1. If the database is offline or unresponsive, the user list cannot be loaded, and an error message will prompt the user to retry later.

XII. Update User Page

a. Identification of Technical or Administrative Activities:
   i. Access Requirements:
      1. The user must log in with admin credentials to access the "Update User" page and modify user details.
   ii. Proper Resources:
      1. Database Connection:
         a. A stable connection is required to fetch and update user data in the system.
      2. Input Validation Rules:
         a. Username must not be empty or duplicate.
         b. Password is optional but must follow security standards if provided.
   iii. Understand System Features:
      1. Form for Updating User Information:
         a. Username: A field for changing the user's name, with validation to check for uniqueness.
         b. Password: An optional field to enter a new password. It is hashed before storing.
         c. Admin Status: A checkbox to mark the user as an admin.
         d. Active Status: A checkbox to set the user as active or inactive.
      2. Validation and Duplicate Check:
         a. The system checks if the new username already exists in the database for another user.
         b. If a duplicate is found, an error message is displayed, and the update is not performed.
      3. Form Submission and Confirmation:
         a. If the data is valid, the form submits the updated information to the database.
         b. A success message is shown, confirming the user update.
      4. Permissions:
         a. Prevents Self-Modification:
            i. Admin cannot update their own account details to avoid conflicts.

b. Materials Needed:
   i. Admin Login Credentials:

1. Needed to authenticate and access the "Update User" page.

ii. User Update Details:

1. Admin must have the username, admin status, and active status for updating an existing user's information.

c. Expected Errors:

i. Empty Username Field:

1. If no username is entered, an error message will prompt for a valid username.

ii. Duplicate Username:

1. If the new username already exists, the system will prevent updating and display an error message.

iii. Empty Form:

1. If the form is submitted blank, errors will occur asking the user to fill in the form

iv. Permission Errors:

1. Non-admin users attempting to access the "Update User" page will be denied access with a permission error.

v. Session Timeout:

1. If the admin's session expires, they must log back in to continue the update process.

vi. Database Connectivity Issues:

1. If the database connection fails, an error will prompt the user to try again later.

XIII. Manage Categories:

a. Identification of Technical or Administrative Activities:

i. Access Requirements:

1. The user must log in with admin credentials to access the "Manage Categories" page and perform administrative actions (add or delete categories).

ii. Proper Resources:

1. Database Connection:
   a. A stable connection is required to fetch, add, and delete category data from the database.
2. Input Validation:
   a. Category Name: Must be unique and not empty. Duplicate categories will trigger an error message.

iii. Understand System Features:

1. Add Category Form:

a. Category Name: A field where the admin can enter the name of the new category. If the field is empty, an error message will be displayed.
b. Submit Button: Clicking the "Add Category" button submits the form and adds the category to the database.
c. Validation and Error Handling:
   i. If the category name is empty, an error message will indicate that the name is required.
   ii. If the category already exists, an error message will notify the user about the duplicate.

2. Delete Category:
   a. Delete Option: Each category in the list has a delete button. Clicking it prompts the admin to confirm the deletion of that category.
   b. Deletion Confirmation: A confirmation prompt ensures the admin is sure before the deletion is performed.
   c. Foreign Key Constraint Handling: If the category is associated with a product, it cannot be deleted. A specific error message will notify the admin of this.
3. Category List:
   a. Display Categories: All categories are listed on the page, showing their names and a delete link next to each.
   b. Category Ordering: Categories are displayed in alphabetical order.

b. Materials Needed:
   i. Admin Login Credentials:
      1. Needed to authenticate and access the "Manage Categories" page.
   ii. Category Details:
      1. Admin must input the category name when adding a new category.

c. Expected Errors:
   i. Empty Category Name:
      1. If the category name is empty, an error message will indicate that the field is required.
   ii. Duplicate Category:
      1. If the category already exists in the database, an error message will notify the user about the duplicate.
   iii. Permission Errors:
      1. Non-admin users attempting to access the "Manage Categories" page will be denied access.
   iv. Session Timeout:

1. If the admin's session expires, they must log back in to continue with the management tasks.

v. Database Connectivity Issues:
   1. If the database connection fails, an error message will prompt the user to try again later.

vi. Foreign Key Constraint on Deletion:
   1. If the category is associated with a product, the deletion will fail, and an error message will inform the admin that the category cannot be deleted.

Section V: Employee Needs:

I. Employee Dashboard:
   a. Identification of Technical or Administrative Activities:
      i. Access Requirements:
         1. Only employees with login credentials can access the dashboard.
         2. Non-admin users will be restricted from performing admin actions, like modifying the inventory system outside of the specified roles.
      ii. Proper Resources:
         1. Database Connection:
            a. A stable connection to the database is required to retrieve low-stock product details, supplier information, and category data.
         2. Inventory Stock Quantities:
            a. The system fetches products with quantities below 10, including their name, quantity, category, supplier name, and supplier contact information.
      iii. Understand System Features:
         1. Low Stock Alerts:
            a. Displays products that are low in stock. If there are items with quantities below 10, they will be displayed in a table on the page
         2. Stock Alert:
            a. If no low-stock items are found, the message "All items are sufficiently stocked." will be displayed.
         3. Employee Actions Section:
            a. View Inventory:
               i. A button allowing employees to view all items in the inventory.
            b. Restock Inventory:
               i. A button allowing employees to restock items that are low in stock.
         4. Helpful Tips Section:

a. Daily Inventory Check:
    i. Employees should regularly monitor inventory levels to prevent running out of stock.
b. Report Discrepancies:
    i. Any discrepancies should be reported to the supervisor as soon as possible.
c. Restocking Procedures:
    i. Employees must follow proper procedures for restocking inventory to ensure everything is updated correctly.
d. Stay Updated:
    i. Keep informed about the company's inventory management procedures and policies.

b. Materials Needed:
    i. Employee Login Credentials:
        1. Required to verify that the user is authorized to access the dashboard and perform actions like viewing and updating inventory.
    ii. Low Stock Data:
        1. The system fetches data regarding items with quantities below 10, including supplier details and category information.

c. Expected Errors:
    i. Authentication Issues:
        1. Employees who are not logged in or do not have the necessary credentials will be given an error message stating that proper authentication is required
    ii. Database Query Issues:
        1. If there is a failure in retrieving data about low-stock items, an error message will be displayed.
    iii. Empty Low Stock List:
        1. If there are no items with low stock, the employee will see a message stating, "All items are sufficiently stocked."
    iv. Permission Errors:
        1. If a non-employee or a user without proper access tries to view or modify inventory, they will be denied access.

II. View Inventory Page:
    a. Identification of Technical or Administrative Activities:
        i. Access Requirements:
            1. Employee Login:
                a. Employees must log in to access the inventory page. Only authorized users with employee credentials can view inventory details.

2. Restricted Permissions:
    a. Non-admin users can view inventory items but cannot modify them. Any administrative actions such as restocking will require proper permissions.

ii. Proper Resources:

1. Database Connection:
    a. A stable connection to the database is required to fetch inventory items, including their details like name, description, quantity, price, category, supplier name, and supplier contact information.
2. Search Functionality:
    a. Search Term:
        i. Employees can search for items by ID, name, description, quantity, price, category, or supplier using the search bar.

iii. Understand System Features:

1. Search Inventory Section:
    a. Search Bar:
        i. Employees can input a search term and click "Search" to filter the inventory based on the term provided. The search functionality looks through all inventory attributes such as name, description, and supplier.
    b. Clear Search Results:
        i. When no results are found, a message informs the employee that no matching items were found based on the search.
2. Inventory Table:
    a. Item Details
        i. The inventory list includes details like the name, description, quantity, price, category, supplier, and contact info for each product.
3. Employee Actions Section:
    a. Restock Inventory:
        i. Employees can click a button to navigate to the Restock Inventory page to update stock levels for any item that is low.

b. Materials Needed:

1. Employee Login Credentials:
    a. Employees must log in to access the inventory page and perform search queries.

c. Expected Errors:

i. Authentication Issues:

1. Employees who are not logged in or do not have the necessary credentials will be given an error message stating that proper authentication is required

ii. <u>Database Query Issues:</u>

1. If the database fails to retrieve inventory data, an error message will prompt the user to try again later.

iii. <u>Empty Search Results:</u>

1. If no inventory matches the search query, the system will display a message stating, "No results found for the given search term."

iv. <u>Permission Errors:</u>

1. If a user without proper permission tries to access restocking features, they will be denied access.

III. <u>View Supplier Page:</u>

a. <u>Identification of Technical or Administrative Activities:</u>

i. <u>Access Requirements:</u>

1. <u>Employee Login:</u>
    a. Employees must log in with their credentials to access the "View Suppliers" page and perform any search actions.
2. <u>Restricted Permissions:</u>
    a. Non-admin users can view supplier details but cannot modify them. Only users with proper permissions may access features beyond viewing, such as managing supplier data.

ii. <u>Proper Resources:</u>

1. <u>Database Connection:</u>
    a. A stable connection is required to fetch supplier details such as name and contact information from the supplier's table.

iii. <u>Understand System Features:</u>

1. <u>Search Suppliers Section:</u>
    a. <u>Search Bar:</u>
        i. The search bar allows employees to input a supplier's name or contact information to filter through available supplier records.
    b. <u>Search Results:</u>
        i. If no matching suppliers are found, a no results message is displayed in red text.
2. <u>Suppliers Table:</u>
    a. <u>Supplier Data:</u>

i. The table displays supplier names and their contact information. Employees can view all suppliers and their details, but they cannot modify these records.

b. Table Layout:

i. The table contains two columns: Supplier Name and Contact Information.

b. Materials Needed:

i. Employee Login Credentials:

1. Employees must log in to access the suppliers' list and perform search queries.

ii. Supplier Details:

1. The database must contain supplier information, including the name and contact information, to ensure the search feature returns valid results.

c. Expected Errors:

i. Authentication Issues:

1. Employees who are not logged in or do not have the necessary credentials will be given an error message stating that proper authentication is required

ii. Database Query Issues:

1. If there is a failure in fetching supplier data from the database, an error message will notify the user of the issue.

iii. Empty Search Results:

1. If no suppliers match the search query, the system will display a message stating, "No results found for the given search term."

iv. Permission Errors:

1. Users without appropriate access permissions may not be able to perform certain actions related to suppliers, like managing or editing the supplier list.

Section VI: Shared Needs:

I. Login Page:

a. Identification of Technical or Administrative Activities:

i. Access Requirements:

1. Required Credentials: Employees must log in using their username and password. Only those with valid credentials are allowed access to the system. Non-authenticated users will be redirected to the login page.
2. Session Management: Upon successful login, a session is initiated to maintain user state throughout their session. If a session is not active, the user will be prompted to log in again.

ii. Proper Resources:

1. Database Connection:
    a. A stable database connection is essential for authenticating users by verifying their login credentials stored in the database.

iii. System Features:
1. Login Form:
    a. The login page contains input fields for username and password, along with a submit button to authenticate the user.
    b. Validation checks are performed on the input fields. If fields are empty, appropriate error messages are displayed (e.g., "Please enter your username" or "Password cannot exceed 72 characters").
2. Error Handling:
    a. Invalid Login Attempts: If the login credentials do not match any record in the database, the system will notify the user with a message such as "Username or password is incorrect."
    b. Inactive Account: If the account is marked as inactive, an error message "Your account is inactive. Please contact an administrator" will be displayed.
3. Session Handling:
    a. After a successful login, session variables are set to store the user's userID, username, and admin status.
    b. The user is then redirected to either the admin dashboard or the user dashboard, based on their role.
4. Security Measures:
    a. Session Timeout: Sessions should automatically expire after a period of inactivity to protect against unauthorized access.
    b. Secure Password Handling: Passwords are hashed using a secure algorithm before being stored in the database.

b. Materials Needed:
   i. Employee Login Credentials:
      1. To successfully log in, employees need valid credentials (username and password).
      2. Employees must ensure their passwords comply with any length restrictions (e.g., not exceeding 72 characters).

c. Expected Errors:
   i. Authentication Errors:
      1. Invalid Credentials: If the username or password is incorrect, the system will return a message: "Username or password is incorrect."

2. Inactive Account: If the account is inactive, the error message "Your account is inactive. Please contact an administrator" will be shown.

ii. Database Query Issues:

1. If there is a failure to fetch user data from the database, an error message will appear

iii. Form Validation Errors:

1. If required fields are missing or incorrect (e.g., an empty username or password), error messages will be displayed to prompt the user to correct the input.

II. Logout Page:

a. Identification of Technical or Administrative Activities:

i. Access Requirements:

1. When a user logs out, the session data must be cleared to ensure that the user no longer has access to restricted content. This typically involves terminating the session to prevent unauthorized access.
2. The user is redirected to a confirmation page after logging out to notify them that their session has ended successfully.
3. Once the user has logged out, they are no longer able to access authenticated areas of the system unless they log back in. Any attempt to access such pages will redirect them to the login page, ensuring that unauthorized users cannot gain access to sensitive information

ii. System Features:

1. Upon logout, the user is informed that their session has ended, and they are typically redirected to a page that confirms this. The system should also ensure that no residual session data remains, effectively logging the user out completely.

b. Expected Errors:

i. Session Management Issues:

1. If session management is not correctly implemented, the user may still have access to the restricted areas, even after logging out. This could lead to security vulnerabilities.

ii. Redirect Failures:

1. If the system fails to redirect to the confirmation page after logout, the user may be left unsure about whether they have successfully logged out. This could also create confusion for the user regarding their session status.

III. Sales Dashboard Page:

a. Identification of Technical or Administrative Activities:

i. Access Requirements

1. Employees must log in to access the sales dashboard and the sales record form. Unauthorized users without proper credentials will be redirected to the login page or denied access to the page.

ii. Proper Resources:

1. Database Connection:
   a. The system must have an active connection to the database to fetch and display product details, sales records, and inventory quantities.

iii. System Features:

1. Sales Form:
   a. Product Selection and Quantity Input: Employees can select the product and specify the quantity to be sold. The system checks whether sufficient inventory is available for the requested quantity and displays any errors if there is insufficient stock.
   b. Sales Record Submission: Once the sale is recorded, the system generates an entry in the sales table, including the sale date, quantity sold, item cost, and the user responsible for the sale.
   c. Quantity Update: The inventory is updated after a sale is recorded to reflect the new available quantity. This is done by subtracting the quantity sold from the current inventory.
2. Sales Record Display:
   a. Sales History: The system displays a list of past sales records, including product name, quantity sold, price, supplier, and the user who processed the sale.
   b. Sorting: The sales records are sorted by date

b. Materials Needed:

i. Sales Data:

1. Employees need access to existing sales records to know the previous transactions before inputting new ones. This helps ensure that the data being entered is correct and aligns with past sales history. For example, when entering a new sale, the user can see previous records to check for consistency and trends.

c. Expected Errors:

i. Authentication Issues:

1. If the user is not logged in or their session has expired, they should be redirected to the login page, or the page should display an authentication error.

ii. Database Query Failures:

1. If the system fails to query the product or sales data correctly, users should receive an error message indicating a failure in retrieving data, and the action should not proceed.

iii. Empty or Invalid Sales Records:
1. If a user submits an invalid quantity (e.g., negative or zero), the system should show a warning, preventing the sale from being recorded.

IV. Restock Inventory Page:
a. Identification of Technical or Administrative Activities:
i. Access Requirements:
1. Employees must log in to access the restock inventory page. Unauthorized users without proper credentials will be denied access.

ii. Proper Resources:
1. Database Connection:
a. The system must maintain an active connection to the database to retrieve product details, inventory quantities, and update them accordingly when restocking. Without this connection, restocking cannot proceed.

iii. System Features:
1. Restock Form:
a. Product Selection and Quantity Input: Employees can select products to restock and specify the quantity to be added. The system will validate the quantity input to ensure it is non-negative.
b. Restock Record Submission: Once the restocking action is completed, the system logs an entry in the restock table with the date, quantity added, and the user responsible for the restock.
c. Inventory Update: After the restock action is recorded, the inventory is updated by adding the specified quantity to the existing stock for each product.
2. Restock Record Display:
a. Restock History: The system displays past restock entries, including the date, product name, quantity added, and the user who performed the restock.
b. Sorting: Restock records are sorted by date in descending order, ensuring that the most recent restock actions are displayed first.

b. Materials Needed:
i. Restock Data:

1. Employees need access to the current inventory quantities to ensure that restocking is performed correctly. This will help maintain accurate stock levels and prevent any discrepancies in the inventory system.

c. Expected Errors:

   i. Authentication Issues:

      1. If a user is not logged in or their session has expired, they should be redirected to the login page, or an authentication error message should be displayed.

   ii. Database Query Failures:

      1. If the system cannot query the product or restock data, users will receive an error message, and the restock action will not be processed.

   iii. Invalid Quantity Input:

      1. If the quantity input for restocking is invalid (e.g., negative or zero), the system will display a warning and will not process the restock until a valid quantity is provided.

V. Change Password Page:

a. Identification of Technical or Administrative Activities:

   i. Access Requirements:

      1. Employees must log in to access the change password page. Unauthorized users without proper credentials will be redirected to the login page or receive an authentication error message.

   ii. Proper Resources:

      1. Database Connection:

         a. The system must maintain an active connection to the database to retrieve the user's information, validate the current password, and update the password in the database. Without this connection, the password update cannot proceed.

   iii. System Features:

      1. Change Password Form:

         a. Current Password Validation:

            i. Employees must input their current password to verify their identity before proceeding with the password change. The system checks this against the stored password hash to ensure the user is authenticated.

         b. New Password Input:

            i. The employee must input a new password, which will be validated based on minimum length (8 characters) and maximum length (72 characters). The system will ensure the password meets these criteria before proceeding.

c. Confirm New Password:
   i. The employee must confirm the new password. If the passwords do not match, an error will be displayed, and the password change will not be processed.

d. Password Update:
   i. Once the current password is validated and the new password confirmed, the system hashes the new password and updates the database with the new password for the authenticated user.

2. Post-Change Actions:
   a. Logout after Password Update:
      1. After a successful password change, the user will be logged out of the system to ensure the new password is used for subsequent logins.
   b. Confirmation Message:
      1. Once the user is logged out, they will be redirected to a confirmation page that indicates the password change was successful.

b. Materials Needed:
   i. Current Password:
      1. The system requires the user's current password to validate the request for a password change.
   ii. New Password:
      1. The new user password input must be validated and updated in the system.

c. Expected Errors:
   i. Authentication Issues:
      1. If the user inputs the wrong current password, they will be informed via an error message. They will be prompted to enter the correct password to continue.
   ii. Database Query Failures:
      1. If the system encounters a failure when querying the database (e.g., inability to update the password or retrieve user data), an error message will be displayed, and the password change will not be processed.
   iii. Password Validation Errors:

1. If the new password does not meet the validation criteria (such as being too short or not matching the confirmation), an error message will be displayed, and the password change will not proceed until the issue is resolved.