

**<<MiniStore application>>**

**Software Requirement Specification**

– Hanoi, August 2022 –

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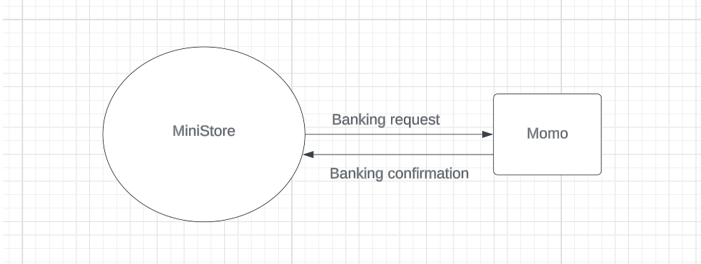
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# I. Overview

## 1. Introduction

The Mini store Management System is an innovative software solution designed to revolutionize the way businesses manage their employees, sales, and products within a mini store setting. By replacing manual processes and paper-based methods, the system aims to streamline operations, increase productivity, and enhance the overall customer experience.

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## 2. System Functions

#### a. Screen Flow

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Description automatically generated

#### b. Screen Details

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Feature | Screen | Description |
| 1 | Login | Login Page | First screen of system, Login required |
| 2 | Register Shifts | Register Shifts | part-time employees register for shifts for the next weekend |
| 3 | Check in/out | Check in page/QR page | Showing QR codes on a computer screen allows employees to register their working hours by scanning the code. The QR codes can be displayed on the screen for employees to scan. |
| 4 | Check in/out | Check-out system | Display QR code for employees to scan at logout, record check-out time after scanning and save it in the system for payroll and attendance management. |
| 5 | Manage Voucher | Show Customer's Voucher | Show Customer's Voucher |
| 6 | Manage Employees | Show employees | Show all employee, online or offline, basic information, and button for detail screen |
| 7 | Manage Employees | Add employees | Show a list of blank space for manager to import new employee's information, button confirm and add |
| 8 | Manage Employees | Profile Employee | Show everything about an employee's information, delete, feedback button... |
| 9 | Manage Sheet | Timekeeping | Show a table of all employees with some basic information about their online/offline sheet, summary of salary and a button of each employee's row to see detail for all of this |
| 10 | Manage Sheet | Show sheet details | Show a table of sheets in week of one employee |
| 11 | Manage Salary | Salary Report | Show a table of an employee's salary status, include day of work, salary by day/month and |
| 12 | Manage Product | List product | Show table product about field (id, name, price, quantity, picture), button back, filter by name product, button update, |
| 13 | Manage Product | Add product | Page about label and text box to insert info product, button add, button back, |
| 14 | Manage Product | Update Product | Allows admin to update the information of a product that already exists in Mini Store. (Price, quantity,), button OK to save, button back |
| 15 | Manage Product | Revenue checking | show list all order bill in day, total revenue, filter the most product sales. |
| 16 | Order Product | Show Products | Show name, price, picture of products |
| 17 | Order Product | Selected Products | Show list products Customer choose. |
| 18 | Order Product | Check-Member | Form registers new Customer, Check-voucher and Accumulated point, Show Voucher |
| 19 | Order Product | Show Bill | Show (price, name, quantity of products, and voucher) for payment |

#### c. User Authorization

|  |  |  |  |
| --- | --- | --- | --- |
| Screen | Manager | Employees | Guard |
| <Screen Login> |  |  |  |
| Login Page | X | X |  |
| <Screen Manage Employees> |  |  |  |
| Show employees | X |  |  |
| Add employees | X |  |  |
| Profile Employee | X |  |  |
| Timekeeping | X |  |  |
| Show sheet details | X |  |  |
| Salary Report | X |  |  |
| Show Customer's Vouchers | X |  |  |
| <Screen Manage Products> |  |  |  |
| List product | X |  |  |
| Add product | X |  |  |
| Update Product | X |  |  |
| Revenue | X |  |  |
| <Screen order Products> |  |  |  |
| Show Products |  | X |  |
| Selected Products |  | X |  |
| Check-Member |  | X |  |
| Show Bill |  | X |  |
| <Screen Check -in> |  |  |  |
| QR page/check-in |  | X | X |
| Check-out |  | X | X |

#### d. Non-Screen Functions

|  |  |  |  |
| --- | --- | --- | --- |
| STT | Feature | Screen | Description |
| 1 | User Friendly | Form Basic / Use Easy | The application will be easy to use, the functions are streamlined so that users can access it easily |
| 2 | Security | Authorize between manager and employee | Determine who has access to specific functionality |
| 3 | Performance | Quick calculation | When employees pay for products to customers, it will be faster and more accurate |

## 3. Entity Relationship Diagram

A picture containing diagram, screenshot, text, rectangle

Description automatically generated

**Entities Description**

|  |  |  |
| --- | --- | --- |
| # | Entity | Description |
| 1 | Employee | Properties (IdEmp, NameEmp,DoB, CCCD,PictureEmp, PhoneEmp, AddressEmp, username,password,Roles(AD,Emp,Graud ) ) |
| 2 | Member | Properties (IdMember,Point,PhoneMember) |
| 3 | Product | Properties (IdProduct, NameProduct, QuantityProduct, PriceProduct,PictureProduct ) |
| 4 | Orders | Properties (IdBill,IdProduct, IdMember,IdEmp,NameProduct, QuantityOrders, PriceProduct, date,Total) |
| 5 | Worksheet | Properties (IdWork, IdEmp,Date, Sheet) |
| 6 | Salary | Properties (IdSalary,IdEmp,TotalSalary, MonthS) |

# II. Functional Requirements

**1.Feature<<LOGIN>>**

**Function <<LOGIN>>**

**Function trigger:** When you open the application, the Login page will be displayed.

**Function description:**

The "Login" function is responsible for authenticating and authorizing users to access the application. When a user attempts to log in, the function checks the user's login information against the stored user data to ensure that the user is authorized to access the application. If the user's login information is valid, the function grants access to the application and the user is directed to the appropriate dashboard or landing page based on their user role. If the user's login information is invalid, the function denies access to the application and displays an error message to the user.

The "Login" function may also include additional security features such as session management, password policies, and two-factor authentication to ensure that user data is kept secure. From a development standpoint, the "Login" function may be implemented using a variety of programming languages and frameworks, depending on the specific application requirements. It is critical that the "Login" function is thoroughly tested and regularly maintained to prevent security vulnerabilities and ensure that users are able to access the application efficiently and securely.

**Screen layout:**

              Logo and branding: The logo and branding should be prominently displayed at the top of the page to help users recognize the website or application.

Login form: The login form should be the main focus of the page. It should include fields for the user's email address or username and password, and a "Remember Me" checkbox.

Call-to-action button: A prominent call-to-action button should be displayed below the login form. The button should be labeled with a clear action, such as "Log In" or "Sign In."

Sign up or register link: If the user does not have an account, a link to sign up or register for an account should be displayed on the login page.

Social media login: Some websites or applications may allow users to log in using their social media accounts. If this feature is available, it should be displayed prominently on the login page.

**Function Details**:

The Login screen typically consists of a form with two input fields - one for the user's username and another for the user's password. The layout of the Login screen may vary depending on the application's branding and design requirements, but the basic structure of the form is usually consistent.

The "Submit" button triggers the Login function to validate the user’s login information and authenticate them.

+If the user’s login information is valid, the user is directed to the appropriate dashboard or landing page based on their user role :

Details: If the login is successful with an Account Manager, the app will direct the user to the Manager page. If the login is successful with an Account Employee, the app will direct the user to the Sales Products page.

+If the credentials are invalid, the user is presented with an error message indicating that their login attempt failed, and they are prompted to try again.

**2.Feature <<Manage Employee>>**

**2.1. Function <<Manage Page>>**

**+Function trigger**: When the user is logged in and verified as a manager, the management page will be displayed.

**+Function description**: The management page allows the manager to   manage the store in general, including products, sales staff, security, and is allowed to view the store's monthly/daily sales report.

**+Screen layout:**

**+Function detail:**

**2.2 Function <<Add Employee>>**

**+Function trigger**: The manager chooses the function of adding employees on the management page.

**+Function description**: A window appears and allows the manager to enter the new employee's information, including granting permission for the new employee to log in and the store's sales system.

**+Screen layout:**

**+Function detail:**

The "Add an employee" feature is a functionality commonly found in human resources management systems, employee management software, or team collaboration tools. It allows managers or administrators to add new employees to the system and gather their relevant information. Here are some function details associated with the "Add an employee" feature:

Employee Information: The feature provides a form or interface where managers can enter the necessary details about the new employee. This typically includes personal information (e.g., name, address, contact information), employment information (e.g., job title, department, start date), and any other relevant data specific to the organization's requirements.

User Accounts and Access: In addition to basic employee information, the feature may include the option to create user accounts for the new employees. This allows them to access relevant systems, tools, or platforms within the organization, such as email, project management software, or employee portals.

Assigning Roles and Permissions: The feature may provide the ability to assign specific roles, access levels, or permissions to the new employee. This determines their level of access to different systems, data, or functionalities within the organization's digital infrastructure.

**2.3 Function <<Show all employee>>**

**+Function trigger:** The manager chooses the function of showing all employees of the store on the management page.

**+Function description:** A table will appear showing all the store's current employees, with a rough summary of the employee's status (in shift or not). Some sort options are also added like searching for a specific employee.

**+Function detail:**

**2.4 Function <<Employee’s Profile>>**

**+Function trigger:** The manager clicks on an employee specifically to see all the information about that employee.

**+Function description:** A window will appear showing all the personal information that the employee has registered, including full name, phone number, address, identification number, shift, number of working days in a month,

**+Function detail:**

The "Show all employee" feature is a functionality commonly found in human resources management systems or employee management software. It allows managers or administrators to view and access information about all employees within an organization. Here are some function details associated with the "Show all employee" feature:

Employee List: The feature provides a comprehensive list of all employees in the organization, typically including their names, positions, contact information, and other relevant details.

Search and Filter: Managers can search for specific employees by name, department, job title, or any other relevant criteria. This helps to quickly locate and retrieve information about specific individuals or groups of employees.

Employee Details: Clicking on an employee's name or profile within the list provides access to their detailed information. This may include personal details, employment history, performance metrics, training records, and any other relevant data.

Contact Information: The feature often includes contact information for each employee, such as email addresses, phone numbers, or internal messaging systems. This enables managers to easily reach out to employees when needed.

**2.5 Function <<Timekeeping>>**

**+Function trigger:** The manager clicks on Timekeeping to see all the information about that employee attendance status.

**+Function description:** The manager will see all the employees’ shifts that have/didn't work during the month.

**2.6 Function <<Show sheet detail>>**

**2.7 Function <<Salary report>>**

**+Function trigger**: The manager clicks on Salary report to see all the detail of salary.

**+Function description:** A summary of the employee's salary and bonus, including the basic salary, bonus, and penalty depending on the employee's operating status.

**+Function detail:**

**3.Feature<<Manage Product>>**

**3.1 Function<<List product>>**

**+Function trigger:** After login/Authentication and click on button “manage product” in manager page.

**+Function description**:

-Actor: Manager

-Roles: This function is responsible for displaying a list of products in the product management system.

-Purpose: It presents the user with an overview of the available products and relevant information associated with each product.

**+Screen layout:**

**+Function Details:**

-Retrieve Product Data: Query the database or data source to fetch the necessary product information, including details such as product name, description, price, quantity, and other relevant attributes.

-Display Product List: Format and present the product data in a visually organized and user-friendly manner, typically in the form of a table or list. Each product entry should include key information, such as the product name and a summary of its attributes.

-Sorting and Filtering: Provide options for users to sort and filter the product list based on different criteria, such as alphabetical order, price, category, or availability. Implement the selected sorting or filtering option to dynamically update the displayed list.

**3.2 Function <<Add product>>**

**+Function trigger**: after login/Authentication by manager account and click button “add new product” in manager product page.

**+Function description:**

-Actor: Manager

-Roles: The "Add Product" function allows users to create and add a new product to the product management system

-Purpose: It provides a form or interface for users to enter the necessary details and attributes of the product, facilitating the systematic addition of new products to the system.

**+Screen layout:**

**+Function Details:**

-Display Product Creation Form: Present a form or user interface that includes fields for entering the required information about the new product

-Save Product Data: Store the captured product information, including the unique identifier, in the database or the appropriate data storage mechanism.

**3.3 Function <<Update Product>>**

**+Function trigger:**  After login/Authentication by manager account and click one product in manager product page.

**+Function description:**

-Actor: manager

-Roles: The "Update Product" function allows users to modify and update the details of an existing product within the product management system

-Purpose: It provides a user interface or form where users can edit specific fields or attributes of a selected product, ensuring accurate and up-to-date product information.

**+Screen layout:**

**+ Function Details:**

-Display Update Form: Present a form or user interface that allows users to modify specific fields or attributes of the product

-Update Product Data: Apply the captured updates to the corresponding fields of the selected product in the database or data storage mechanism

**3.4 Function <<Revenue checking>>**

**+Function trigger**: After login/Authentication by manager account and click button “Revenue” in manager page.

**+Function description:**

-Actor: manager

-Roles: The "Revenue Checking" function enables users to calculate and track the revenue generated by the products within the product management system

-Purpose: It provides a mechanism to calculate revenue based on product sales, prices, and quantities, allowing users to monitor the financial performance of the products.

**+Screen layout:**

**+ Function Details:**

-Retrieve Sales Data: Retrieve relevant sales data from the database or data source

-Calculate Revenue: Apply the appropriate calculations to determine the revenue generated by each product.

**4. Order Product**

**4.1. Show Product**

* **Function trigger:** After the login of the employees, the product page will be displayed.
* **Function description:**

   The implementation of the "show product" function may vary depending on the platform and programming language being used. In general, the function would involve retrieving the necessary information about the product from a data source such as a database or an API. This information may include details such as the product name, description, image, price, and availability.

   Once the product information has been retrieved, the "show product" function would typically be responsible for rendering this information in a user-friendly format. This may involve creating and manipulating HTML elements and applying CSS styles to achieve the desired visual presentation of the product information.

   In addition to displaying product information, the "show product" function may also be responsible for handling user interactions such as adding the product to a shopping cart or wish list. This may involve making additional API calls or updating a local data store with the user's selections.

* **Screen layout:** not yet

* **Function Detail:**

     User Interface: Once the product information has been retrieved, the function should render this information in a user-friendly format. This may involve creating HTML elements to display the product name, description, image, price, and other details.

      Security: The function should be designed with security in mind to prevent unauthorized access or manipulation of the product information. This may involve implementing authentication and authorization mechanisms, validating user input, and sanitizing any data that is passed between the client and server.

     Event Handling: The "show product" function may also handle user interactions such as adding the product to a shopping cart or wish list. This may involve attaching event listeners to HTML elements and making additional API calls to update the user's selections.

**4.2. Selected products:**

* **Function trigger**: When the customer has selected the product, the staff enters the data on the screen.
* **Function description**: This function generates a report of the products that the customer has selected and displays it on the screen. The report includes the name, quantity, and price of each item.

* **Screen layout**: not yet

* **Function Detail:** The "Show list products Customer choose" function is designed to display a list of products that a customer has selected during their shopping session. This function can be triggered by the customer at any time during the shopping process, or it can be automatically displayed at the end of the shopping session.

The function typically retrieves the list of selected products from a database or shopping cart system and then generates a report or list that is displayed on the screen. The list may include details such as the name, quantity, price, and any other relevant information about each selected product.

This function can be a valuable tool for customers, as it allows them to review their selections before completing the purchase and ensures that they have not missed any important items. It can also help to increase customer satisfaction by providing transparency and clarity throughout the shopping process.

**4.3. Check-Member**

* **Function trigger:** After purchasing the product, the member check will be displayed.
* **Function description:**

Once user information has been retrieved, the "Check-Member" function will typically compare this information with a predefined set of criteria to determine whether the user is a member of the specified group or not. have the required role to enable them to lower the price of the product. This could involve comparing a user's ID or username with a list of authorized users, checking if a user has a specific attribute or flag set in their profile, or identifying demonstrate that the user has been granted a specific discount or level of access.

* **Screen layout:** not yet
* **Function Detail:**

   The function will retrieve the user's information from a data source such as a database or an API, based on the user ID provided. The function then checks the user's information with the specified group, role, or authority to determine if the user meets the criteria. This may involve querying other data sources or applying specific business rules.

**4.4. Show bill.**

* **Function trigger:** When paying for the product, Show Bill will be displayed
* **Function description:**

  Overall, “Show Bill” function is a critical component of any financial transaction system, as it allows users to view and verify the details of their purchases or transactions. It should be designed to be fast, accurate, and user-friendly, with clear and concise output that can be easily understood and acted upon.

* **Screen layout:** not yet
* **Function Detail:**

   The details of the bill or invoice, including the amount due, the items purchased, and any applicable discounts or taxes.

   The function retrieves the necessary information for the bill, including the amount due, the items purchased, any discounts applied, and any taxes or fees. It then formats this information into a clear and readable format, such as a table or a list, and displays it to the user.