**E Asset Management System**

**Frontend Functionality Documentation: E Asset Management System**

Welcome to the E Asset Management System user guide. This document provides detailed information on how to use our web-based platform for managing electronic assets (e-assets). Whether you are a new user, a registered member, or an administrator, this guide will help you navigate and make the most of the system.

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**1. Getting Started**

1.1 Home Page

The home page of our website serves as the main entry point. Here, you can explore available e-assets, learn more about our services, and access various features.

1.2 Navigation Bar

The navigation bar at the top of the page provides essential options:

- Login: Existing users can log in here.

- Signup: New users can create an account.

- Contact/About: Access information about our organization.

1.3 Account Creation and Login

- Account Creation: New users are prompted to register by providing:

- Email

- Preferred username

- Password (with confirmation)

- Phone number

- Name

The system generates a unique ID for each user.

- Login: If you've already registered, log in to your account using your email/username and password.

1.4 Password Reset

If you forget your password, use the "Forgot Password" option on the login page. You'll receive instructions on how to reset your password via email.

**2. User Dashboard**

2.1 User View

Upon successful login, you'll be directed to the user dashboard (`userview.html`), where you can access various features and functionalities.

2.2 Adding Assets to Cart

When you attempt to add an asset to your cart from the main page, the system will prompt you to log in first. After logging in, you can proceed to add assets to your cart.

2.3 Browsing and Selecting E Assets

Browse through different categories of e-assets, select the ones you want to borrow, and add them to your cart.

2.4 Proceeding to Checkout

Review the assets in your cart, confirm your selections, and proceed to checkout to complete the borrowing process.

2.5 Viewing Transaction History

From the home page's navigation bar, click on "User History" to view your transaction history, including borrowed assets and past transactions.

2.6 Logging Out

After completing your transactions, remember to log out for security purposes.

**3. Administrator's Panel**

3.1 Admin Access

Administrators have special privileges, including the ability to:

- Add e-assets

- Declare rent rates

- Monitor borrowed assets

- Access asset management and history

3.2 Adding E Assets

Administrators can add electronic assets to the system, specifying details such as asset name, type, and availability.

3.3 Declaring Rent

Admins can set rent rates for different types of assets, ensuring accurate billing for users.

3.4 Monitoring Borrowed Assets

Admins can track assets that are currently borrowed and their status.

3.5 Asset Management and History

Administrators can access a comprehensive view of all assets, including their usage history and borrowing records.

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**Backend Functionality Documentation: E Asset Management System**

This document provides a comprehensive overview of the backend functionalities of the E Asset Management System. It covers the operations available to both users and administrators and includes information on exceptions that can be thrown based on user input.

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**1. User Functionality**

1.1 Login

Users can log in using their registered credentials (email/username and password).

1.2 Registration

New users can register by providing the following information:

- Email

- Preferred username

- Password (with confirmation)

- Phone number

- Name

A unique ID is generated for each user during registration.

1.3 Factory Pattern Implementation

After login, a factory pattern is implemented to differentiate between user and admin pages.

1.4 Borrowing Assets

Users can borrow assets from the system, specifying the asset they want.

1.5 Returning Assets

Users can return borrowed assets. The system updates the asset's status to indicate whether it's returned or not.

1.6 Viewing Borrowed Asset Details

Users can view details of the assets they have borrowed, including status (returned or not returned).

1.7 Viewing Available Assets

Users can view a list of all available assets in the system.

1.8 Exception Handling for User Operations

Exceptions are thrown based on user input to handle scenarios such as:

- Trying to borrow an asset already borrowed by another user.

- Providing incorrect or missing information during registration or login.

**2. Admin Functionality**

2.1 Admin Login

Administrators can log in using their credentials.

2.2 Adding Assets

Admins can add assets to the system, providing details like asset name, type, and availability.

2.3 Retrieving Overdue Assets

Admins can retrieve overdue assets based on criteria such as date, asset name, or asset type.

2.4 Listing All Assets

Admins can view a comprehensive list of all assets, including their usage history and borrowing records.

2.5 Exception Handling for Admin Operations

Exceptions are thrown based on admin actions, such as:

- Adding assets with incomplete or incorrect information.

- Retrieving overdue assets with invalid criteria.

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