Project Overview

The Asset Management System is a web-based system developed to support the asset procurement and tracking process within an organization. The main objective of this project is to simulate a simplified but realistic asset purchase request workflow, starting from staff purchase requests, through procurement processing, supplier delivery, quality inspection, and finally recording accepted assets into inventory.

This system focuses on request tracking and asset lifecycle visibility rather than full enterprise-level asset management. It allows users to create purchase requests for assets, monitor request statuses, and trace how accepted assets are converted into inventory records. Each request follows a structured workflow that reflects common procurement practices used in real organizations.

Assumptions

1. **Single Organization Context**
The system assumes all users belong to the same organization. There is no multi-organization or multi-tenant support.

2. **Staff Records Pre-Exist**
Staff information (staffID) is assumed to already exist in the database. The system validates staff IDs but does not provide staff management features.

3. **Procurement Role is Simulated**
There is no separate procurement user role. Status transitions such as Approved, Ordered, and Completed are simulated through backend logic rather than user permissions.

4. **Suppliers are Limited**
Only predefined suppliers (e.g., supplierID 1 and 2) are used. Supplier creation and management are not included.

5. **One Request Contains One Request Item**
Each purchase request contains exactly one request item, but it can have more than one units. This simplifies request-item relationships and improves traceability.

6. **Each Accepted Unit Creates One Inventory Record**
When assets are accepted during inspection, each accepted unit is recorded as one unique inventory item.

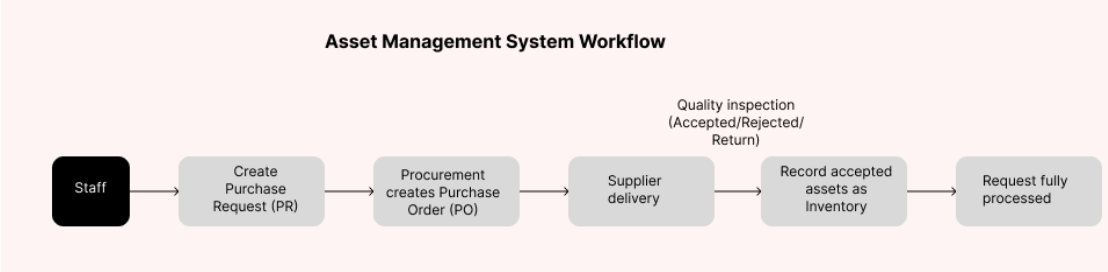
7. **Status Transitions Follow Logical Order**
Request statuses follow a logical procurement flow. The system does not strictly enforce role-based restrictions but assumes correct usage.

8. **Local Deployment Environment**
The system is designed to run locally using XAMPP with Apache and MySQL, not for cloud deployment.

Tech Stack

Frontend – HTML, CSS, Javascript, React
Backend – PHP
Server – MYSQL

Workflow



Step 1: Staff Creates Purchase Request (PR)

A staff member submits a purchase request specifying the required asset details and quantity.

Step 2: Procurement Review and Approval

After reviewing by procurement, the request status changes from Pending to Approved, simulating procurement approval.

Step 3: Purchase Order (PO) Creation

Once approved, procurement places a purchase order. The request status moves to Ordered. Supplier information is linked to the request item.

Step 4: Supplier Delivery

The supplier delivers the assets.

Step 5: Quality Inspection

Delivered assets undergo inspection:

- Accepted units
- Rejected units
- Returned units

Quantities are recorded in the request item.

Step 6: Inventory Recording

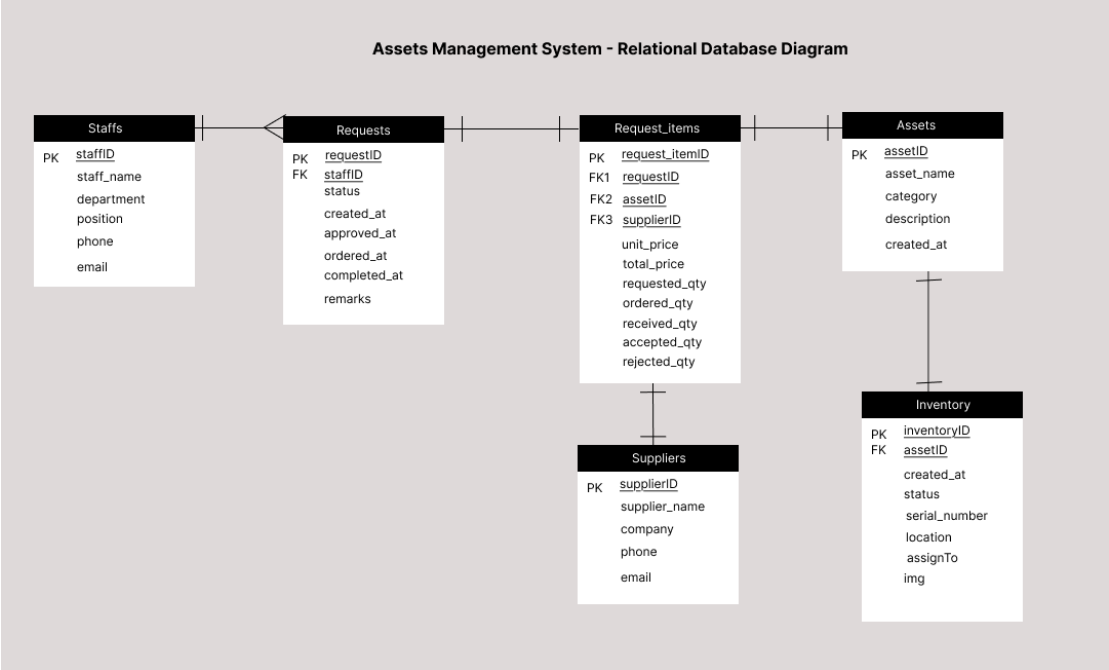
Only each of the accepted unit is converted into an individual inventory record with:

- Status set to AVAILABLE
- Assigned staff if applicable

Step 7: Request Completion

Once all items are processed, the request status becomes Completed.

Relational Database Diagram



System Capabilities

1. Create New Purchase Request of Assets

Staff can create a new purchase request by submitting asset details. When a request is created:

a. A new asset record is created

b. A purchase request record is created

c. A request item record is linked to both the request and asset

d. The request status is set to Pending

All these operations are handled in a single backend transaction to ensure atomicity.

2. View Purchase Requests

Users can view a list of all purchase requests in the dashboard. Requests can be selected by clicking the record row or view icon to view detailed information, including request items details and status history.

3. View Inventory List

The inventory module displays all recorded inventory items.

Inventory records are generated only after assets are accepted during quality inspection.

4. Trace Request History Details of Inventory

The system allows tracing inventory items back to its original request details by collapse it below the inventory details.

Limitations

1. Authentication and Login Module

- No user login or authentication system
- No password management
- No session-based access control

2. Filtering and Searching

- No advanced filtering
- No search functionality for assets, requests, or inventory

3. Master Data Import and Export

- No CSV or Excel import for bulk asset creation and summary report export
- All data is entered manually

4. Barcode Support

- No barcode generation or scanning for inventory
- Inventory identification relies on IDs and serial numbers

5. Role-Based Access Control

- No differentiation between staff, procurement, or admin roles
- Status transitions are manually simulated

6. CRUD Limitations

- No edit functionality for requests or assets
- No delete functionality
- No update functionality for existing inventory records

7. Inventory Management Scope

- Inventory tracking is basic
- No depreciation, maintenance scheduling, or asset lifecycle analytics

8. Responsive Design

- UI is not fully optimized for mobile or tablet devices
- Designed primarily for desktop use