

HPL GAMEDESIGN INVENTORY SYSTEM

Version: 1.0

Last Updated: February 2025

1. Overview

The HPL Inventory System is a comprehensive web-based application designed to manage IT assets efficiently, streamline inventory tracking, and facilitate computer allocation and transfers. The system ensures accountability, optimizes resource allocation, and maintains accurate records of assets within an organization. It provides a secure and structured environment for both administrators and standard users to perform inventory-related operations effectively.

2. System Requirements

2.1. Development Environment

To develop, deploy, and run the system, ensure the following requirements are met:

- **Operating System:** Windows 10 or later (64-bit recommended)
- **Processor:** Intel Core i5 or higher / AMD equivalent
- **Storage:** 500GB or more (SSD preferred for better performance)
- **RAM:** 8GB or more (16GB recommended for optimal performance)
- **Software Dependencies:**
 - XAMPP (Apache, MySQL, PHP, phpMyAdmin)
 - PHP 7.4 or later
 - Composer (for dependency management)
 - Node.js (if front-end features require JavaScript-based libraries)
- **Database:** MySQL 5.7 or later
- **Security Features:** SSL/TLS encryption enabled for secure communication

2.2. Website Requirements

For optimal system performance, users should meet the following specifications:

- **Supported Browsers:** Google Chrome (latest version), Mozilla Firefox, Microsoft Edge
- **Internet Speed:** Minimum 5 Mbps (recommended for seamless operations)
- **RAM:** 8GB or more (16GB recommended for multitasking efficiency)
- **Display Resolution:** 1920x1080 or higher for better user experience

3. User Roles and Functions

3.1. Admin Functions

Administrators have full control over the system and can perform the following tasks:

- Approve and remove users
- View and manage the inventory dashboard
- Add, update, and remove assets (parts and components)

- Build and configure a computer using available assets
- Assign computers to employees
- Transfer computers between employees as needed
- Process asset returns when an employee resigns or reports a defective unit (via the "Allocate PC" tab)
- Register and update employee data
- Backup the database

3.2. Public Functions

Public can perform or view the following tasks:

- Register as an admin via the "Register" tab
- View and sign the Employee Equipment Agreement

4. System Processes

4.1. Inventory Management

- Admins can add, update, and delete inventory items.
- The system maintains a version-controlled audit log for asset modifications.

4.2. Computer Allocation

- Admin assigns computers to employees based on availability.
- The system automatically logs all allocations, transfers and returns for tracking purposes.

4.3. Employee Data Management

- Employees are registered in the database with relevant details (name, department, contact information, assigned assets, etc.).
- Historical logs of allocations, transfers, and returns are maintained for reference and reporting.

4.4. Database Backup and Recovery

- Database restoration can be performed in case of system failure or data corruption.

5. Hosting and Deployment

- **Hosting Platform:** InfinityFree (supports MySQL and website hosting)
- **Deployment Strategy:**
 - Development: Local XAMPP environment
 - Staging: Test server for quality assurance
 - Production: Live deployment on InfinityFree or alternative cloud hosting

6. Security Measures

To ensure data protection and prevent unauthorized access, the system implements:

- **Role-Based Access Control (RBAC):** Ensures only authorized users can perform specific tasks.
- **Data Encryption:** Passwords and sensitive data are hashed using bcrypt.
- **Session Management:** Automatic logout after a period of inactivity.

- **Audit Logs:** Records all changes made by users for transparency and accountability.

7. Bug Reporting and Feedback

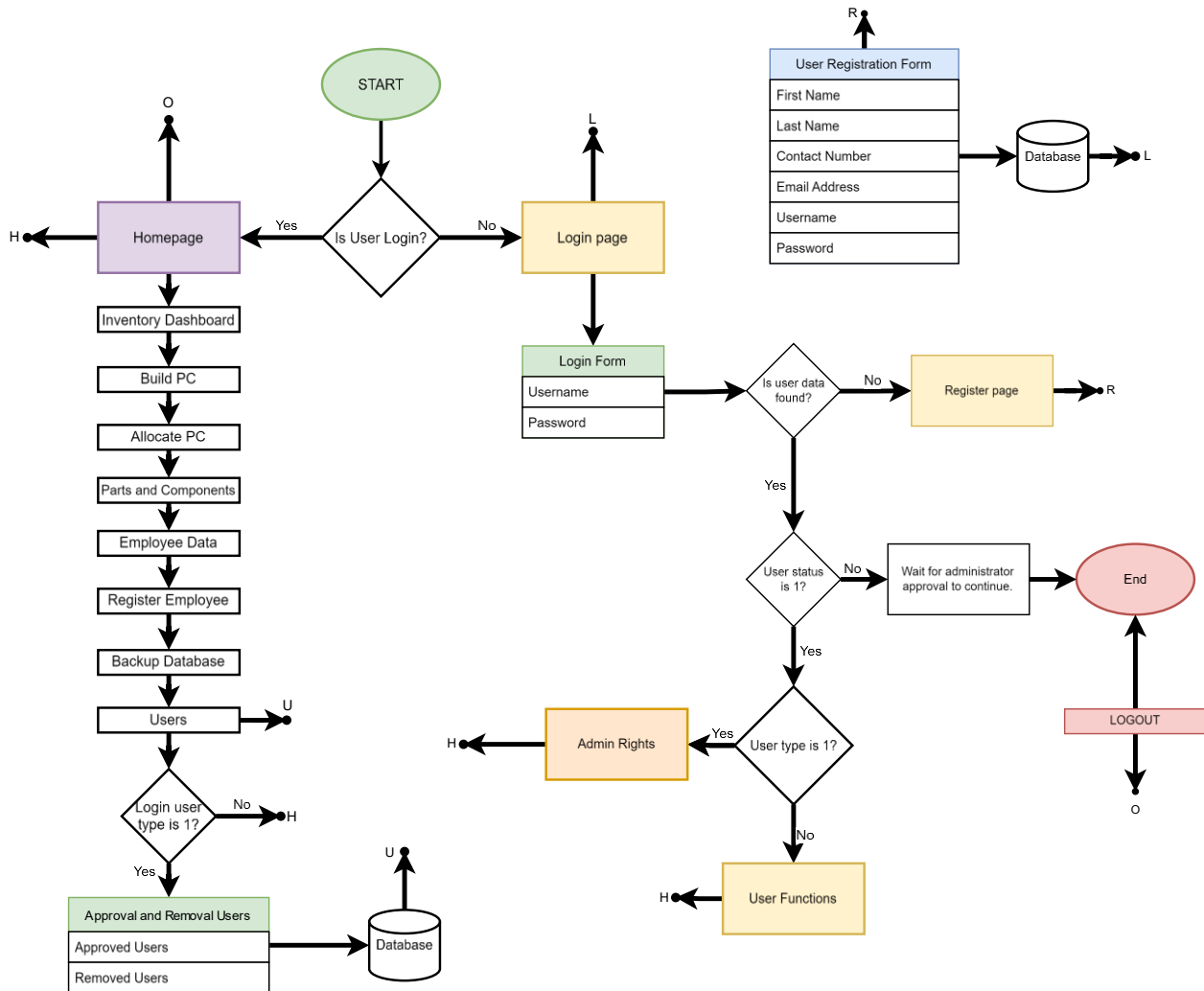
During beta testing, any bugs or issues should be reported as follows:

- **Issue Documentation:** Capture the issue with a screenshot and a brief description.
- **Upload to Bug Report Folder:** Submit the report via the designated [Google Drive link](#).
- **Follow-up:** Developers will review and resolve reported issues based on priority.
- **Notes:** Signature uploads are restricted to a one-time submission to ensure document integrity.

8. Additional Resources

- **Flowchart and Diagrams:** Attached as visual representations of system processes.
- **User Guide:** Includes instructional videos and a step-by-step manual for system navigation. Click [here](#) to view the system navigation video.

Flowchart Process



ADMIN	USERS	PUBLIC
Approval of Users	Add assets	Signing Employee Agreement
Add assets	Build a PC	Admin User Registration Form
Build a PC	Register Employee Data	
Register Employee Data	View Employee Data	
View Employee Data	View Employee Agreement	
View Employee Agreement	View Inventory Status	
View Inventory Status	Allocate a PC to Employee	
Allocate a PC to Employee	Transfer a PC to other Employee	
Transfer a PC to other Employee	Return a PC from the Employee	
Return a PC from the Employee	Download database for backup	
Download database for backup	View the Available Parts and Components	
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