PrintZone Management System

Abstract

This project aims to develop a web-based PrintZone Management System for students to submit and track their printing tasks in a controlled way. Each student will have a fixed printing quota (e.g., 200 pages) and can log in to upload documents, select print options, and assign jobs to one of three available printers. The system will solve problems like unmanaged printing, no transparency about queue status, and manual quota tracking. The application will be built using **PHP** with **MySQL** as the database, and a **HTML, CSS, and JavaScript** frontend.

Objectives

1. Allow students to log in and submit print jobs through a simple web interface.

2. Enforce a per-user printing quota (200 pages) and track remaining pages accurately.

3. Manage three printers with separate queues to handle multiple users at the same time.

4. Provide an admin panel for managing users, quotas, and printer/job status.

5. Generate basic usage reports (total pages printed, per-user usage, per-printer load).

Scope of the Project

- Student registration and login system (authentication with PHP + MySQL).

- Each student has a printing quota stored and updated in the database.

- File upload feature for print jobs (e.g., PDF/DOCX), with page count and job details recorded.

- Print job queue management for three printers, each with its own status and job list.

- Admin module to:

    o View all users and their remaining quota

    o Adjust quotas (add/remove pages)

    o Monitor printer queues and job status (queued/printing/completed/failed)

- User dashboard showing:
  - Remaining pages
  - Active print jobs with status
  - Past print history
- Basic reporting: total pages printed by date, by user, and by printer.

Tools and Technologies

- **Backend:** PHP
- **Database:** MySQL
- **Frontend:** HTML, CSS, JavaScript
- **Web Server:** XAMPP
- **Other:**
  - PHP file upload handling for documents
  - Basic session management for login/logout

Timeline (17 November – 11 December)

17 Nov – 21 Nov

- Finalize requirements and feature list
- Design ERD and database schema (tables for users, printers, jobs, quotas, etc.)
- Set up project structure: PHP folders, DB connection, config files

22 Nov – 27 Nov

- Implement user registration and login (PHP + MySQL sessions)
- Implement user profile + quota tracking (view remaining pages, total used)
- Create basic frontend layouts (HTML/CSS) for login, dashboard, and navigation

28 Nov – 3 Dec

- Implement file upload and print job creation (store job details in DB)
- Implement printer management (three printers, each with separate queue)
- Add logic to check quota before job submission (block if not enough pages)

- Add job status fields: queued, printing, completed, cancelled, failed

4 Dec – 8 Dec

- Build admin panel:
    - View all users and their quotas
    - Modify quotas (add/subtract pages)
    - View all jobs filtered by user, printer, status, date
    - Set printer status (online/offline/maintenance – at least logically in DB)
- Add reporting pages (simple tables with totals and counts)

9 Dec – 11 Dec

- UI polishing (CSS clean-up, better layouts, validation messages)
- Testing main flows: login, quota logic, job creation, queue handling, admin actions
- Fix bugs, prepare screenshots, and write short documentation for submission

Expected Output

- A working web-based PrintZone Management System where students can:
    - Log in
    - View their remaining page quota
    - Upload files and submit print jobs to one of three printers
- A functioning print queue system with job status tracking per printer.
- An admin interface to manage users, quotas, printers, and view all print jobs.
- A MySQL-backed system demonstrating proper database design, relationships, and usage in PHP.