Title

Tender Management System for PCMC Municipal Corporation

Asmita Manna, Tanmay Rajput, Vaibhav Pattanshetti, Yashkumar Rathod, Ved Rathod.

Abstract

This document shall describe about the Tender Management System which has been developed for the PCMC Municipal Corporation. System will provide digital platform and automated approach for HODs and clerks to manage and monitor the tenders in a better way. Strictly for use within the organization, HODs can publish tenders on the platform, see which vendors participated, and check for submitted/posted documents.

Data up to October 2023 Your system is front-end by HTML, CSS, JavaScript, back-end by Django (Python) and database management by PostgreSQL/MySQL. PCMC's Information and Technology department is in active collaboration with our team to take it further past development and deployment.

Introduction

Municipal corporations publish tenders and vendors make a bid which requires complete management and tracking of the required documentation. The traditional paper-based system can be inefficient, resulting in delays, misplaced documents, and mismanagement of bids.

In order to solve this, we built a web-based internal Tender Management System which:

We will secure login to the HODs and manage the tenders.

From Oct 2023 since the data is up to limit.

Helps track vendor participation and docs submissions

Allows clerks to upload missing documents to maintain transparency.

This has been developed for internal use only which will help in automating tender tracking thus reducing the workload of the municipal corporation.

Objective

- The main purposes of this system are:
- Develop a digital platform to manage thy tender process for PCMC.
- To improve the reducing manual errors and paperwork.
- HOD Login Portal & Tender Management: High-Security Login Portal for HODs.
- For real time tracking of vendor participation.
- For clerks to upload and manage submitted documents.
- Cashcards and Instant AIPs To flag deficiencies in vendor submissions.
- To cloud delivery while making data secure and access limited (Internal use only).

Methodology

The **Tender Management System** follows a structured development approach:

1 System Design & Planning

Requirements gathering from **PCMC's IT department**.

Identifying the **key functionalities** needed by HODs and clerks.

Designing the **database schema for tender management**.

2 Technology Stack

Frontend: HTML, CSS, JavaScript

Backend: Django (Python)

Database: PostgreSQL/MySQL

3 System Flow

Login Page – For authentication with email and password.

21 Same Page Tender – Full Tender list (Tender Name & ID).

3 Vendors – This page lists vendors by tender Carpet and Carpet Tenders page.

4 Document Submission Page — Displays submitted and missing documents.

5 Clerks Upload Section Helps clerks to upload missing, documents of vendors.

4 Development and Utilization

This is about database development: HODs, tenders, vendors, documents.

Frontend Development: Using Bootstrap and JavaScript to create a responsive UI.

Backend Development: Developed Django authentication, data processing, and API endpoints.

Integration & Testing: Testing login, tender tracking, and document upload functionality

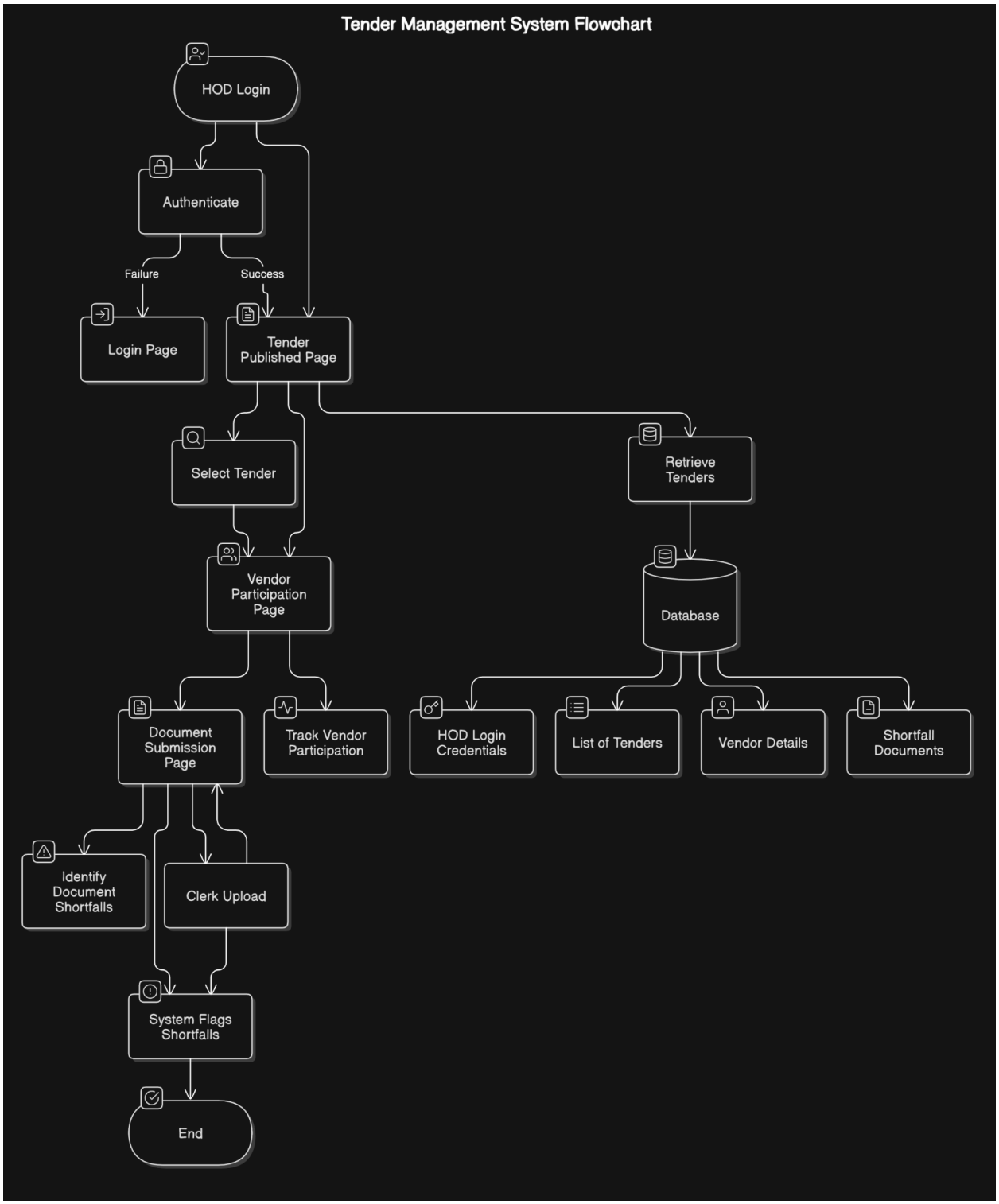
5 Field Visit & Deployment

Validation of Project: A DBA meeting had been scheduled with the PCMC IT department for validation of system design.

Deployment: Deploying the system on a secure server.

Field visit (after implementation): Receiving feedback from HODs and clerks

Architectural Diagram



Conclusion

The PCMC Municipal Corporation Tender Management System (TMS) is an internal, closed platform designed for the standardization and automation of the tendering process. This system will greatly reduce manual errors and streamline municipal operations with secure authentication, real time vendor tracking and an automated document verification system.

With active cooperation from PCMC's IT department, this system will be successfully deployed such that tenders are processed in a transparent and efficient manner.