

System Documentation Report – Procurement Information and Communication Portal (PICP Advanced)

1. Introduction

- **System Name:** Procurement Information and Communication Portal (PICP Advanced)
- **Technology Stack:** PHP, MySQL, HTML/CSS, JavaScript, Bootstrap, FontAwesome
- **Purpose:** A web-based system to automate procurement processes, manage supplier interactions, oversee budgets, and ensure transparency in organizational purchasing.
- **User Roles:**
 - **Administrator:** Configures system settings and manages users.
 - **Procurement Officer:** Manages requisitions, suppliers, and RFQs.
 - **Finance Officer:** Handles budgets, invoices, and payments.
 - **Supplier:** Submits quotations, accesses purchase orders, and submits invoices.

2. System Overview

- **Architecture:**
 - **Client-Side:** Web interface powered by Bootstrap and JavaScript.
 - **Server-Side:** PHP scripts for processing business logic and workflows.
 - **Database:** MySQL for storing user, requisition, supplier, and financial data.
- **Core Functions:**
 1. Automate requisition-to-procurement processes.
 2. Enable supplier interactions through a dedicated portal.
 3. Manage budgets, payments, and contracts.
 4. Ensure transparency with reports and notifications.

3. Modules and Functionalities

3.1 User Management

- **Files:** manage_users.php , edit_user.php , activate_user.php , deactivate_user.php
- **Functions:**
 - Create, modify, and deactivate user accounts.
 - Assign roles (Admin, Procurement, Finance, Supplier).
 - Track user activity and login history.

3.2 Supplier Management

- **Files:** manage_suppliers.php , edit_supplier.php , send_supplier_login_link.php , supplier_login.php
- **Functions:**
 - Register and maintain supplier profiles.
 - Send login credentials to suppliers via email.
 - Allow suppliers to access messages and submit RFQs.

3.3 Requisition Management

- **Files:** create_requisition.php , edit_requisition.php , approve_requisitions.php , manage_approvals.php
- **Workflow:**
 1. Procurement officer creates requisition.
 2. Requisition is routed for approval.
 3. Approved requisition proceeds to RFQ/PO stage.

3.4 Request for Quotation (RFQ)

- **Files:** create_rfq.php , manage_rfq.php , evaluate_proposal.php

- **Functions:**

- Create RFQs from approved requisitions.
- Send RFQs to suppliers.
- Review and evaluate supplier proposals.

3.5 Purchase Order (PO) Management

- **Files:** create_po.php , manage_purchase_orders.php , print_po.php , send_po.php

- **Functions:**

- Generate POs from approved RFQs.
- Distribute POs to suppliers via email or print.
- Monitor PO status until completion.

3.6 Invoice and Payment Management

- **Files:** create_invoice.php , manage_invoices.php , invoice_report.php , manage_payments.php

- **Functions:**

- Suppliers submit invoices.
- Finance officers verify and process payments.
- Produce invoice and payment reports.

3.7 Contract Management

- **Files:** generate_contract.php , manage_contracts.php , print_contract.php

- **Functions:**

- Generate and store supplier contracts.
- Track active and expired contracts.
- Offer contract print/download functionality.

3.8 Budget and Spend Control

- **Files:** manage_budgets.php , manage_gl_accounts.php , manage_spend_categories.php , spend_analysis.php
- **Functions:**
 - Establish and monitor departmental budgets.
 - Manage General Ledger (GL) accounts.
 - Track spending categories.
 - Conduct spend analysis for financial planning.

3.9 Messaging and Notifications

- **Files:** inbox.php , compose_message.php , notifications.php , supplier_inbox.php , supplier_compose.php
- **Functions:**
 - Support internal messaging between users.
 - Enable supplier communication through the portal.
 - Issue notifications for requisitions, POs, and payments.

3.10 Reports and Analytics

- **Files:** invoice_report.php , spend_analysis.php
- **Functions:**
 - Produce procurement and financial reports.
 - Deliver spend trend analytics to support decision-making.

4. Database Structure

- **Key Entities:** Users, Departments, Suppliers, Requisitions, RFQs, Purchase Orders, Invoices, Payments, Contracts, Budgets, Messages, Notifications.
- **Note:** An Entity-Relationship Diagram (ERD) is available upon request.

5. System Workflows

1. **Requisition to Approval:** Officer submits requisition → Approval → RFQ creation.
2. **RFQ to PO:** RFQ sent → Supplier submits response → Proposal evaluated → PO issued.
3. **PO to Goods Receipt:** PO sent → Supplier delivers → Goods receipt recorded.
4. **Invoice to Payment:** Supplier submits invoice → Finance verifies → Payment processed.
5. **Supplier Communication:** Messaging and notifications keep stakeholders informed.

6. Security Features

- User authentication with session management.
- Role-based access control for secure operations.
- Data hashing for sensitive information (`generate_hash.php`).
- Secure supplier login links.

7. Testing and Validation

- **Functional Testing:** Each module tested independently.
- **Workflow Testing:** End-to-end procurement cycle validated.
- **User Acceptance Testing:** Stakeholder feedback confirmed system usability.

8. Conclusion and Recommendations

- **Achievements:**

- Streamlined procurement processes.
- Enhanced budget management.
- Improved supplier collaboration.

- **Limitations:**

- Limited to web-based access.
- Some workflows require manual approval.

- **Future Enhancements:**

- Mobile application integration.
- AI-driven spend forecasting.
- Integration with ERP/accounting systems.