Institute of information technology, Allahabad

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Course: Software engineering

Group project - P9

Software Design Specification (SDS)

Grievance Management

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1. Introduction

1.1 Purpose

The purpose of the Grievance Portal is to provide an efficient and transparent system for managing grievances within an organization. This document outlines the software development specifications for the Grievance Portal.

1.2 Scope

The Grievance Portal named **“Samadhan”** is a web-based application accessible to registered users. It will allow users to submit grievances, track their progress, and provide analytics for monitoring and reporting purposes.

2. Functional Requirements

2.1 User Registration and Authentication

2.1.1 User Registration

- Users should be able to create new accounts by providing their aadhar number, email address, username, and password.
- The system should validate the email address format and check for unique usernames.
- Upon successful registration, users should receive a confirmation email.

2.1.2 User Authentication

- Registered users should be able to log in using their credentials.
- The system should authenticate users and provide access control based on their roles.

2.2 Grievance Submission

2.2.1 Grievance Form

- Registered users should have the ability to submit grievances through the portal.
- The system should capture relevant information, including grievance category, description, and any supporting documents like photo.
- Users should receive a confirmation email upon successful submission.

2.2.2 Grievance Tracking

- Users should be able to track the status of their submitted grievances.
- The system will display the current status and provide updates as the grievance progresses.

2.3 Grievance Assignment and Management

2.3.1 Admin Dashboard

- Admin should have access to a dashboard for managing grievances.

- The dashboard should provide an overview of submitted grievances, their status, and assigned personnel.

2.3.2 Grievance Assignment

- Admin users should be able to assign submitted grievances to appropriate personnel for resolution.
- Assigned personnel should receive notifications and have access to the details of the assigned grievances.

2.3.3 Grievance Updates and Comments

- Assigned personnel should be able to update the status of grievances and add comments.
- Users should receive notifications regarding any updates or comments on their grievances.

2.4 Grievance Resolution and Closure

2.4.1 Grievance Resolution

- Assigned personnel should be able to update the status of grievances as they progress through the resolution process.
- The system should provide options to indicate the current stage of resolution.

2.4.2 Grievance Closure

- Once a grievance is resolved, assigned personnel should be able to mark it as closed.
- Users should receive notifications regarding the resolution and closure of their grievances.

2.5 Reporting and Analytics

2.5.1 Reports

- The system should provide reports on the status and resolution time of grievances.
- Admin users should have access to metrics and data visualizations to monitor the performance of the grievance management process.

3. Non-Functional Requirements

3.1 Security

3.1.1 User Data Protection

- User passwords should be stored securely using industry-standard hashing and salting techniques.
- Access to sensitive information, such as personal details and grievance data, is restricted to authorized users.

3.1.2 Secure Communication

- The system should use secure protocols (e.g., HTTPS) for communication between clients and the server.

3.2 Performance

3.2.1 Scalability

- The system should be able to handle a reasonable number of concurrent users without significant performance degradation.
- The architecture supports horizontal scalability to accommodate increasing user traffic and growing grievance data.

3.2.2 Response Times

- Response times for key operations, such as submitting a grievance or updating its status, should be within acceptable limits.

3.3 Availability

- The system should have a high level of availability to ensure users can access it when needed.
- Adequate measures should be in place to handle system failures and ensure minimal downtime.

3.4 User Interface

- The user interface should be intuitive, user-friendly, and accessible across different devices and browsers.
- The design should adhere to modern web standards and best practices.

4. Assumptions and Constraints

4.1 Development Technology

- The Grievance Portal is developed using a modern web framework, such as html css for frontend and javascript and for backend.
- Our team has followed industry best practices and coding standards.

4.2 Project Timeline

- The project timeline allows for four months of development.

5. Integration and Interfaces

5.1 User Management System

- The Grievance Portal integrates with the organization's existing user management system for user authentication and authorization.

6. Data Management

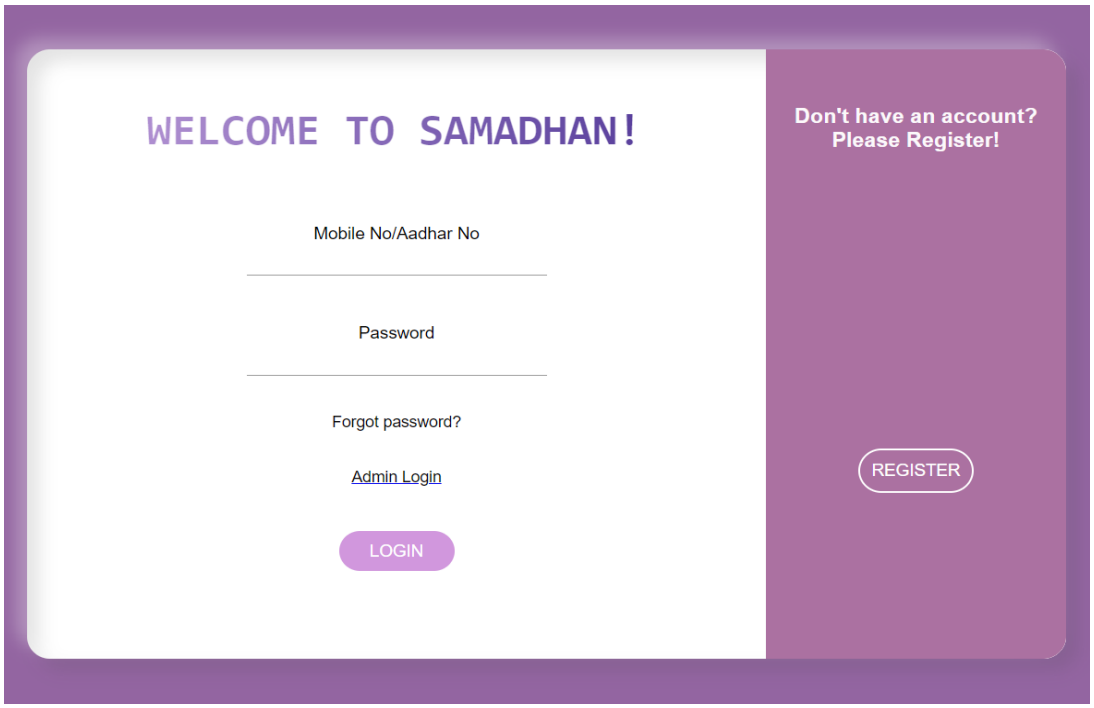
6.1 Database Design

- The database is designed to store user information, grievance details, comments, and status updates.
- Adequate measures are taken to ensure data integrity, security, and backup.

6.2 Data Privacy

- The system complies with relevant data privacy regulations, such as GDPR or CCPA.
- User consent and data protection practices are implemented to safeguard personal information.

7. User Interface Design



If you already have an account, just Login.

LOGIN

CREATE YOUR ACCOUNT

For SAMADHAN

Name

Email

Aadhar Number
XXXX XXXX XXXX

Mobile Number
999-999-9999

Set Password

Pin Code

Address

Gender:○Male○Female

SIGN UP

Grievance Status

Grievance ID	Grievance Description	Status
123	Issue with Electricity	In Queue

Set Reminder

Grievance ID:

Reminder Date:

mm/dd/yyyy

Reminder Message:

Set Reminder

8. Testing

8.1 Test Plan

- A comprehensive test plan is developed to ensure the functionality, performance, and security of the Grievance Portal.
- The plan covers unit testing, integration testing, system testing, and user acceptance testing.

8.2 Quality Assurance

- Quality assurance processes and standards are followed throughout the development lifecycle.
- Code reviews, automated testing, and continuous integration is implemented to maintain code quality.

9. Deployment and Release

9.1 Deployment Plan

- A deployment plan is prepared to ensure a smooth rollout of the Grievance Portal.
- The plan covers installation, configuration, and data migration procedures.

9.2 Version Control

- Version control practices are followed to track changes, manage releases, and facilitate collaboration among developers.

10. Conclusion

10.1

- This Software Design Specification document provides an overview of the “Samadhan” application, outlining its components, architecture, and functional requirements. The document serves as a guide for the development team to implement a grievance registration portal.