Project Proposal

Course: CSC-225 Software Engineering

Instructor: Miss Asiya Batool

Submission Date: November 9, 2025

Project Title: Complaint Management and Tracking System

Submitted by:

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Fall – 2025

Department of Computer Science, Namal University Mianwali

Requirement Provider Agreement

Requirement Provider Agreement

This Agreement is executed on 7 November 2025 between:

Student Developer Team:
Represented by:

1. Arfa Tayyabah (NUM-BSCS-2024-16)
2. Samra Zamurd (NUM-BSCS-2024-72)
3. Muhammad Bilal (NUM-BSCS-2023-21)

Students of 2nd Year, Computer Science Department, Namal University.

Requirement Provider:
SDC and Mr. Shahzad Asif

Project Scope and Objectives

The Student Developer Team will create the "Campus Complaint and Maintenance Tracking System" for their Software Engineering course project. The Requirement Provider will supply specifications, feedback, and support throughout development to ensure success.

Student Team Responsibilities

The Student Developer Team shall:

- Conduct sessions with the Requirement Provider to gather requirements
- Deliver a prototype of the software along with technical documentation
- Provide progress updates and maintain professional communication throughout the project timeline
- Adhere to agreed-upon timelines and quality standards

Requirement Provider Responsibilities

The Requirement Provider shall:

- Provide clear and detailed system requirements
- Participate in review meetings and discussions
- Provide feedback in a timely manner
- Providing the necessary support for project success

Project Timeline

- **Commencement Date:** November 3, 2025
- **Completion Date:** January 12, 2025
- **Milestone Reviews:** Bi-weekly progress assessments

Intellectual Property

Intellectual property rights from this project will be co-owned by the Student Developer Team and the Requirement Provider, with academic credit to the Student Developer Team.

Confidentiality

Both parties agree to keep all information, documentation, and materials exchanged during the project confidential, even after the agreement ends.

Section 7: Signatures

Student Developer Team:

1. Name: Arfa Tayyabah Date: November 7, 2025
   Signature: Arfa
2. Name: Samra Zamurd Date: November 7, 2025
   Signature: Samra
3. Name: M. Bilal Date: November 7, 2025
   Signature:

Requirement Provider:

Name: Shahzad Asif Date: 07/11/25

Signature:

This agreement is prepared as part of an academic project for the Software Engineering course.

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1 Introduction

The Complaint Management and Tracking System is a platform designed to digitalize complaint processing within a university. It ensures that every campus facility issue is reported, tracked and resolved efficiently. The proposed system will serve multiple types of users including students, faculty, staff members and administration. Students can report any issue immediately and see the progress. Faculty and staff can also file complaints regarding workplace issues as well as play a role in resolving students' complaints. Administration can submit complaints, resolve them, update their status and generate performance reports.

2 Problem Statement

In manual complaint handling system within a university, complaints are submitted via emails or verbal communication. There is no system to record complaints and track them to check progress. Communication between complainants and the administration is limited which delays response time and complaint resolution. Complainants cannot see any progress on their complaint. This unstructured system causes inefficiency and decreases user satisfaction.

The Campus Complaint Management and Tracking system solves this problem through a digital platform which enables complainants to submit their complaints. It enables them to track their complaint and receive status updates by assigning a unique ID to each complaint. It aims to enhance response and resolution times by keeping record of all registered complaints. It allows administrators to generate reports and analyze them for future improvements.

3 Project Objectives

The objectives of this project are as follows:

1. To reduce response time and resolution delays caused by manual management of complaints.
2. To enable complaint tracking where users receive updates and notifications throughout the resolution process
3. To enhance efficiency by allowing the administrators to analyze performance and generate reports
4. To increase user satisfaction through feedback mechanisms and improve transparency in handling complaints

4 Stakeholders Identification

The individuals and the groups who will interact and be affected by the Campus Complaint Management System are given below. Identifying all these persons is necessary to gather all required information and requirements of the system.

4.1 Students

Role: End users who submit their complaints regarding academic, administrative or technical issues.

Relationship with the System:

Students can submit their complaints, view and track them. They can also provide feedback about complaint resolution.

4.2 Faculty

Role: End users who submit their complaints regarding academic or workplace issues. They can also be involved in solving academic complaints.

Relationship with the System:

Faculty can Submit complaints regarding academic or administrative issues. They can track complaints they have submitted. They can resolve complaints on academic matters and provide feedback on student's complaints.

4.3 Staff Members

Role: Administrative and technical staff who may submit their complaints regarding administrative and technical issues.

Relationship with the System:

They can submit complaints regarding workplace issues. They can resolve complaints on administrative matters and provide feedback on student's complaints.

4.4 Complaint Handlers / System Operators

Role: Administrative members who are responsible for operating the system. They receive, review and handle complaints.

Relationship with the System:

They receive complaints and review them. They can update complaint status and communicate with complainants. They can record complaints, generate performance reports and document action on complaint resolutions.

5 Methodology

The Complaint Management and Tracking System will be developed using the Agile Software Development Methodology (Scrum Framework). This methodology will promote iterative development, flexibility, and user feedback, making it ideal for campus-level systems involving multiple users.

5.1 Reason for choosing Scrum Framework

1. Multiple user roles (students, faculty, maintenance staff, administrators) may change requirements according to need.

2. Scrum enables faster delivery of working parts and early user feedback.

3. Bi-weekly Requirement Provider (RP) meetings align with Scrum's sprint review philosophy.
4. Problems are detected and resolved at early stages
5. User Interface requires continuous feedback from client.
6. Agile allows team to learn and improve working with time.

5.2 Scrum Framework Components

5.2.1 Sprint Structure

Each sprint will consist of following activities:

1. **Sprint Planning**: Define sprint goals and select backlog items.
2. **Daily Scrum**: 15-minute team meetings
3. **Sprint Review**: Deliver sprint increment to stakeholders and get feedback.
4. **Sprint Retrospective**: Discuss last sprint and identify improvements.

5.2.2 Scrum Artifacts

1. **Product Backlog**: List of features and requirements
2. **Sprint Backlog**: Tasks to be performed in the current sprint
3. **Increment**: Working software delivered at end of each sprint

5.2.3 Team Roles

1. **Product Owner (Requirement Provider)**: Defines requirements and priorities.
2. **Scrum Master (Arfa Tayyabah)**: Establishes scrum process and guides team.
3. **Development Team**: All three members will collaboratively build the system.

5.3 Development Schedule

The project will span 12 months divided into following sprints:

5.3.1 Sprint 1-2: Project Initialization

1. Team formation and role assignment
2. Initial product backlog creation
3. Project meetings with RP
4. User story creation and prioritization
5. **Deliverable**: Requirements document

5.3.2 Sprints 3-4: User Authentication and Dashboards

1. User authentication and authorization
2. Separate accounts for all end users
3. Basic UI design
4. **Deliverable**: Users can log into the system

5.3.3 Sprints 5-6: Complaint Submission

1. Complaint submission interface
2. Complaint Categories
3. Basic Database Structure
4. **Deliverable**: Users can submit and view complaints

5.3.4 Sprints 7-8: Complaint Tracking and Updates

1. Status update mechanism
2. Email notification system
3. **Deliverable**: Users can track complaint progress

5.3.5 Sprints 9-10: Admin Features

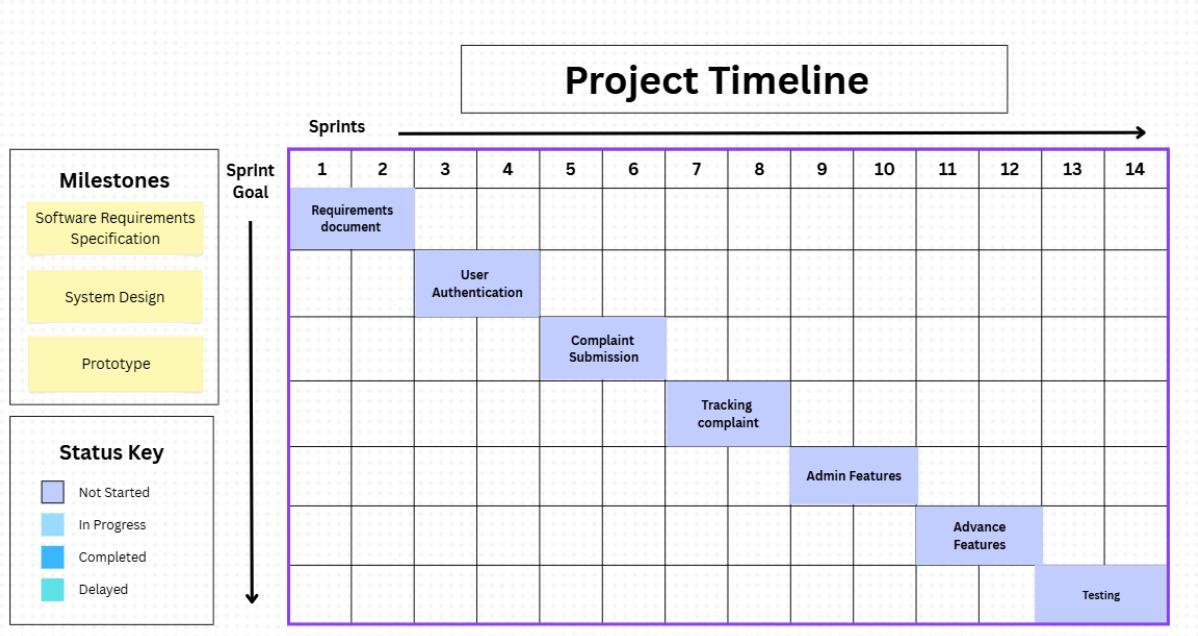
1. Admin dashboard development
2. Complaint assignment system
3. Basic reporting functionality
4. **Deliverable**: Complete admin panel

5.3.6 Sprints 11-12: Advanced Features

1. File upload functionality
2. In-system messaging
3. Mobile-responsive design
4. Analytics dashboard
5. **Deliverable**: Feature-complete system

5.3.7 Sprints 13-14: Testing

1. Comprehensive testing (unit, integration)
2. Performance optimization
3. Bug fixes and refinements
4. Documentation
5. **Deliverable**: Production-ready system



6 Tools and Technologies

The following tools and technologies will be used for developing Complaint Management and Tracking System:

Section	Tool / Technology	Purpose
Front-end	HTML, CSS and JavaScript	User friendly interface design
Backend	PHP or Python (Flask)	Handling business logic and user requests
Database	MySQL or SQLite	Storing complaints, users and system data
Design Tools	Figma / Canva	UI/UX and prototype design
Version Control	Git, GitHub	Source code management and collaboration
Documentation	LaTeX	Preparing professional reports
IDE	Visual Studio Code	Code development and debugging
Testing Tools	JIRA, YouTrack, TestLink	Testing, validation and issue tracking
Implementation	Docker / Local Server	System hosting environment

7 References

References

[1] Claude (Anthropic AI), "Suppose you are a requirement engineer tasked with making a complaint management system, what questions would you ask your RP" *Anthropic, Sonnet 4.5*, Nov. 4, 2025. [Online]. Available: `https://claude.ai`

[2] Claude (Anthropic AI), "Suppose you are a requirement engineer tasked with making a complaint management system, how would you describe the system and problem it solves" *Anthropic, Sonnet 4.5*, Nov. 4, 2025. [Online]. Available: `https://claude.ai`

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[5] Claude (Anthropic AI), "My teacher asked me to add prompts that I have given to AI in writing this proposal in references section, guide me how to add them adhering to IEEE" *Anthropic, Sonnet 4.5*, Nov. 6, 2025. [Online]. Available: `https://claude.ai`