Project Report: Complaint Management System

1. Project Overview

The Complaint Management System is a web-based application developed using the Flask framework. It allows students to submit complaints through a streamlined interface and enables administrators to manage and respond to those complaints. The system integrates with Azure services for data storage and logging, ensuring scalability and reliability.

2. Objectives

- To simplify and digitize the complaint submission process for students.
- To provide an organized dashboard for administrators to view and manage complaints.
- To ensure secure storage of complaint data and related images using cloud services.
- To enable real-time alerts and automation through Logic Apps integration.

3. Technologies Used

- Flask: Web application framework
- HTML (Jinja2): Frontend templates rendering
- Azure Blob Storage: Stores complaint-related images
- Azure SQL Database: Stores structured complaint data
- Azure Logic Apps: Automates responses or alerts
- Python: Backend logic and Azure SDKs usage
- Dotenv: Loads environment-specific configuration

4. System Architecture

- Frontend: HTML templates rendered by Flask
- Backend: `app.py` contains routes and business logic

- Storage:
  - Azure Blob for media files
  - Azure SQL for complaint records
- Integration:
  - Logic Apps for workflows such as email notifications

5. Key Functionalities

5.1 Student Features

- Submit complaints with image attachments.
- Access personal dashboard to track complaint status.

5.2 Admin Features

- View all submitted complaints.
- Manage, update, or delete complaints as necessary.

6. Security & Environment

- Sensitive credentials managed via a `.env` file.
- Uses secure uploads and randomized secret keys for session management.

7. Future Enhancements

- Implement user authentication and role-based access control.
- Enable email/SMS notifications to users on status updates.
- Add analytics dashboard for administrators.
- Improve UI responsiveness and accessibility.