# **Chapter one**

# **1. Introduction**

Technology is playing a significant role in simplifying and enhancing human activities across various sectors. In today’s world, where organizations and institutions strive to provide fast, efficient, and accurate services, embracing technology has become a necessity to meet user demands and improve operational efficiency. To remain competitive and effective, organizations must adopt computerized systems that streamline their activities and eliminate the inefficiencies associated with manual processes.

Dilla University Legal Aid Service (DULAS**)** is a critical initiative designed to address the legal needs of financially disadvantaged and marginalized members of the community. It operates under the Dilla University School of Law in collaboration with the United Nations, aiming to bridge the justice gap by providing free legal assistance. Despite its noble mission, the service currently relies on a manual system for case registration, tracking, and assignment, which leads to inefficiencies such as delays, errors in data handling, and challenges in communication.

Currently, cases are managed manually by coordinators, and legal professionals are assigned without an automated workflow, creating additional challenges in tracking case progress and managing workloads effectively. Reports are prepared manually, making it time-consuming and inefficient. Furthermore, there is no centralized database, leading to disorganized data storage and difficulties in retrieval, which impacts service delivery.

To address these challenges, this project aims to design and develop an automated, web-based system for DULAS. The system will enable efficient case management, centralized data storage, and streamlined communication between coordinators, legal professionals, and clients. This computerized system will not only enhance the speed and accuracy of operations but will also provide transparency and accessibility to legal services, ensuring that DULAS fulfills its mission of promoting justice and equity in a more effective manner.

By transitioning from a manual to a digital system, DULAS can overcome its current limitations, providing faster, more reliable, and user-friendly services to its clients. This system will also reduce the workload of coordinators and faculty, allowing them to focus on delivering high-quality legal assistance to those in need.

## **1.1 Background of the organization**

The Dilla University Legal Aid Service (DULAS) is a transformative initiative designed to bridge the justice gap for financially disadvantaged and vulnerable members of the community. Established under the auspices of the Dilla University School of Law and supported by the United Nations, DULAS embodies the principles of access to justice and equity, offering free legal services to those who cannot afford representation.

Currently, DULAS operates across five centers, including its primary hub in Dilla. Each center is overseen by a dedicated coordinator who plays a crucial role in assessing cases and forwarding them to the Dilla University School of Law. The law school then assigns cases to specialized faculty members based on their expertise, workload, and availability, ensuring efficient and professional handling of each legal issue.

By providing meticulous and personalized attention to each case, DULAS delivers meaningful support to underserved communities while fostering an inclusive and accessible justice system. This initiative not only addresses immediate legal needs but also contributes to the broader mission of social equity by empowering individuals and strengthening community trust in the legal process.

DULAS stands as a beacon of hope and justice, exemplifying the values of compassion, professionalism, and a steadfast commitment to serving society. Through its structured operations and impactful services, DULAS continues to create lasting change in the lives of many, while upholding the highest standards of legal advocacy and support.

## **1.2 Introduction about the project**

The DU Legal Aid Service currently operates through a manual system that handles legal aid

requests from clients in need. This service is available across multiple offices, including in Dilla

and four additional branch offices. In its current state, the process of managing, reporting, and

assigning cases is highly unstructured and manual system.

Each office coordinator is responsible for collecting client cases by registering their information, filling out forms, and reporting to the DU School of Law. Coordinators assess whether a case requires advanced legal aid and then DU School of Law decide whether to escalate it to specialized staff or legal experts. Once escalated, a lawyer or faculty member is assigned to the case based on their availability and specialization. However, this manual workflow introduces delays, increases workload inefficiencies, and poses challenges in maintaining organized records.

Moreover, the coordinators must generate daily reports manually for the DU School of Law. This includes information on the number of clients served, the cases assigned, and the status of ongoing cases. The absence of system leads to inconsistencies in data recording, reporting, and case follow ups. Additionally, assigning cases to legal professionals involves assessing their workload manually, which often results in overburdening or underutilization. Notifications regarding assignments are communicated verbally or through informal channels, which further hampers efficiency.

To address these challenges, our project aims to develop an automated web-based system that will streamline the processes of case registration, coordination, reporting, lawyer assignment and data handling system. This system will allow coordinators to efficiently register clients and escalate cases by filling out predefined forms. The system will check the availability and specialization of legal staff or faculty, ensuring that cases are assigned to the right professional.

Once a lawyer or faculty member is assigned, they will receive a real-time notification through the system, confirming their case assignment and enabling them to track the case status. Additionally, coordinators will have access to a centralized platform for daily reporting, reducing manual errors and ensuring consistency. This system will also maintain a comprehensive database of case histories, lawyer workloads, and client details, making data management seamless and accessible. By implementing this system as part of our final-year project, we aim to modernize the DU Legal Aid Service, improve efficiency, and ensure timely and equitable access to legal assistance for the community.

## **1.3 Statement of problem**

The current manual system employed by the DU Legal Aid Service is presenting several key challenges. First, case management is inefficient, as manual processes for registering cases and assigning legal professionals hinder timely service delivery. Additionally, requires coordinators to track and report case progress manually, which is outdated Infrastructure Furthermore, data management poses significant challenges; paper-based storage is disorganized, difficult to access, and at risk of loss or damage. Limited Accessibility also a problem in paper-based system restricts coordinators, legal advisors, and administrators from accessing case records remotely. Communication gaps also exist, as notifications regarding case assignments depend on informal methods, leading to delays and misunderstandings. This project seeks to address these issues by implementing digitalize, centralized and efficient web-based system for the DU Legal Aid Service.

## **1.4 Objective of the project**

### **1.4.1 General Objective**

The main objective of this project is to design web based Legal Aid Case Management System (LACMS) for the Dilla University

### **1.4.2 Specific objective**

To meet the general objective the following specific objective will be done

* Develop a digital platform where clients register their legal cases through coordinators.
* Replace the manual, paper-based registration and reporting process with an efficient digital system that captures all necessary client and case detail.
* Design a user-friendly interface that ensures accessibility for coordinators, faculty members and other with varying levels of digital literacy
* Streamline Case Assignment: Develop a mechanism to assign complex cases to faculty members based on workload, specialization, and availability. Include a notification feature to inform faculty members about their assignments in real time.
* Data Management: Create a secure, centralized database for storing client information, case details, case progress updates and ensure easy data retrieval.
* Improve Service Accessibility: can access remotely

The realization of these objectives will enable DU Legal Aid to modernize its operations, address existing inefficiencies, and significantly improve its capacity to provide timely, equitable, and effective legal assistance to the community.

## **1.5 Scope and limitation**

### **1.5.1 Scope**

The scope of this project outlines the boundaries and features designed to enhance the efficiency and reliability of the DU Legal Aid Service. It includes several key areas, starting with client case management, where coordinators will register new cases by collecting client details and uploading relevant documentation. The system will feature a user-friendly interface that allows easy access to the status of ongoing cases. Additionally, case assignment will be streamlined, assigning cases to faculty members or legal professionals based on their specialization and current workload, ensuring a fair distribution of tasks and preventing any staff member from becoming overburdened.

Moreover, the project will implement a notification system that sends real-time alerts to assigned lawyers or faculty members regarding their case assignments, while also notifying coordinators and administrators about overdue cases or pending actions. A reporting system will enable coordinators to generate reports. providing administrators with statistical insights on case handling, resolution times, and individual staff performance. The system will feature database management for storing client details, case histories, and reports, allowing for easy data retrieval and backup. Role-based access control will ensure data privacy and integrity, with users accessing only the features relevant to their roles. Finally, performance metrics will be established to monitor lawyer performance and generate workload reports, helping administrators evaluate resource efficiency.

### **1.5.2 Limitation**

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## 1.6 Methodology

The methodology section outlines the structured approach used to design, develop, and implement the proposed system. It provides a clear roadmap for achieving project goals while ensuring efficiency and accuracy in system development.

### **1.6.1. Data Gathering Methodology**

To gather the necessary information for system development, the following techniques will be employed:

1. Interview

* Conduct interviews with DU Legal Aid coordinators, faculty, and administrators
* Focus on understanding the challenges of the current manual system and the specific features users expect from the new system.

2. Document Analysis

* Analyze existing forms, case records, and reports used in the manual system to understand data flow and content requirements.
* Identify bottlenecks and inefficiencies to address in the system.

3. Observation

Observe current processes such as case registration, report generation, and lawyer assignment. Identify bottlenecks and inefficiencies to address in the system.

### **1.6.2. Design Methodology**

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### **1.6.3 Implementation Methodology**

The Implementation Methodology outlines the step-by-step process for developing and deploying the Legal Aid Case Management System (LACMS). This phase translates the design and requirements into a functional system by focusing on efficient coding, configuration, integration, and deployment. The implementation methodology will emphasize modular development, iterative testing, and collaboration to ensure the system is reliable, scalable, and user-friendly

**Modular Development**

The system will be developed in a modular fashion, dividing the project into smaller, manageable components to streamline the implementation process. key phases of implementation.

* Development: each module will be developed independently to ensure modularity and reusability.

Core functionalities include

**Case Registration**: Digitalize client and case data input.

**Case Assignment**: Allocating cases based on faculty availability and specialization.

**Workload Management**: Balancing and tracking case distribution.

**Reporting System**: Generating detailed reports on case progress and faculty workload.

**Data management**

* Integration: Connecting individual modules (backend and frontend).

Protecting sensitive data and secure access control mechanisms.

* **Iterative Development**

It involves: Incremental Development, Collaboration, and Continuous Testing

### **1.6.4. Testing Methodology**

Testing ensures that the Legal Aid Case Management System meets functional, performance, and security requirements. A combination of manual and automated testing approaches will be applied to achieve robust system validation

Types of Testing

**Unit Testing:** Testing individual components, such as case registration, assignment, reporting features and database in isolation.

**Integration Testing:** Verifying communication between modules, such as the backend API and frontend interface. Ensuring data flows seamlessly from user input to database storage and reporting

**Functional Testing:** will focus on validating the functional requirements mainly ensures that the system performs as expected and meets the users' needs

* Validating the system's features against the requirements:
* Proper handling of case assignment.
* Accurate workload distribution.
* Notification delivery to faculty

**User Acceptance Testing (UAT):**

Coordinators and faculty members will test the system in a real-world environment. feedback will guide final adjustments before deployment.

### **1.6.5. Development Environment and Programming Tool**

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## **1.7 Feasibility Study**

### **1.7.1 Technical Feasibility**

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### **1.7.2 Operational Feasibility**

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### **1.7.3 Financial Feasibility**

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### **1.7.4 Time Feasibility**

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## **1.8 Benefit of the project**

The proposed system for DU Legal Aid Service is designed to address inefficiencies in manual processes, improve service delivery, and enhance operational transparency. below are the key benefits of the project.

1. Improved Efficiency in Case Management: Automates the process of registering, assigning, data management and tracking legal aid cases

* Reduces delays caused by manual documentation and paperwork.
* Provides coordinators and faculty members with an organized system to manage workloads effectively

2. Real-Time Notifications and Communication

* Provides notifications to assigned coordinators and legal professionals, ensuring timely follow-ups.
* Facilitates communication between clients, coordinators, and faculty members through a centralized platform.

3. Accurate Reporting and Data Management

* Maintains a centralized database for all case records, making it easier to generate detailed reports.
* Ensures accuracy and security of data, reducing the risk of errors and data loss associated with manual systems.

4. Long-Term Impact: Strengthens the capacity of DU Legal Aid Service to provide high-quality, reliable legal assistance.

## **1.9 Project work plan /schedule**

Note that the project schedule is designed with a balance of structure and adaptability to ensure successful completion within the given timeframe but it may flexible because of Overlapping tasks, adaptable task prioritization, feedback integration and others.

# **2.Chapter two Existing system**

## **2.1 Introduction**

The analysis for this project involved a detailed study of the current manual system used by the Dilla University Legal Aid Service (DULAS). The existing system is entirely non-computerized, with all operations, including case registration, tracking, reporting, and storing handled manually.

Analyzing the existing system ensures the development of a new, automated software system that delivers efficiency, effectiveness, accuracy, and reliability in managing legal aid services. This system aims to address the challenges posed by manual processes, such as delays, data mismanagement, and communication gaps.

The goal of conducting a comprehensive and thorough analysis of the current manual operations is to gather critical data and insights. These findings will assist significantly in designing and implementing a modern, web-based system for DULAS. The new system will streamline case management, improve workload distribution, enhance reporting accuracy, and ensure equitable access to justice for marginalized communities.

## **2.1 Description of the Existing System**

The Dilla University Legal Aid Service (DULAS) is a transformative initiative designed to bridge the justice gap for financially disadvantaged and vulnerable members of the community. Established under the auspices of the Dilla University School of Law and supported by the United Nations, DULAS embodies the principles of access to justice and equity, offering free legal services to those who cannot afford representation.

Currently, DULAS operates across five centers, including its primary hub in Dilla. Each center is overseen by a dedicated coordinator who plays a crucial role in assessing cases and forwarding them to the Dilla University School of Law. The law school then assigns cases to specialized faculty members based on their expertise, workload, and availability, ensuring efficient and professional handling of each legal issue.

By providing meticulous and personalized attention to each case, DULAS delivers meaningful support to underserved communities while fostering an inclusive and accessible justice system. This initiative not only addresses immediate legal needs but also contributes to the broader mission of social equity by empowering individuals and strengthening community trust in the legal process. DULAS stands as a beacon of hope and justice, exemplifying the values of compassion, professionalism, and a steadfast commitment to serving society. Through its structured operations and impactful services, DULAS continues to create lasting change in the lives of many, while upholding the highest standards of legal advocacy and support.

## **2.3 Limitation of existing system**

It is crucial to modernize operations in today's fast-paced world to address the challenges associated with manual processes. The current manual system at Dilla University Legal Aid Service (DULAS) presents several challenges and inefficiencies, including:

* **Slow Speed of Operations:** Registering cases, assigning legal professionals, and tracking progress are time-consuming, leading to delays in service delivery.
* **Conflicting Information:** Inconsistent and poorly maintained records create confusion and reduce the reliability of information.
* **Data Redundancy:** Duplicate entries often occur in manual systems, causing inefficiencies in data management and reporting.
* **Inaccurate Information:** Errors in manually handled data reduce the accuracy of case records and reports.
* **Inability to Analyze Past Data:** Tracking case outcomes, faculty performance, and workload history is difficult, hindering decision-making and strategic planning.
* **High Operational Costs:** The day-to-day activities of the current manual system are resource-intensive, requiring significant time, paper, and effort.
* **Accessibility Challenges:** Retrieving case files or relevant information is time-consuming and cumbersome due to disorganized, paper-based storage.
* **Workload Imbalance:** Manual assignment of cases to faculty members often results in unequal distribution of work, creating inefficiencies.
* **Communication Gaps:** Notifications and updates rely on informal methods, causing delays and errors in case handling and communication with clients.

An automated system for managing legal aid services is a much more efficient, reliable, and cost-effective alternative to the current manual system. It would eliminate many of the underlying problems, and improve service delivery

## **2.4 Model of Existing system**

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### **2.4.1 Actor**

several key actors play distinct roles:

**Client/Beneficiary**:

* Seeks legal aid services and provides case information to coordinators.
* Receives updates on the case status and outcomes.

**Coordinator**:

* Acts as the primary point of contact for clients.
* Registers new cases and manually assigns them to faculty members.
* Tracks case progress and prepares reports.

**Faculty Member (Lawyer)**:

* Handles legal cases
* Provides legal advice, prepares case files, and ensures timely resolution.

**Administrator/Manager**:

* Oversees overall operations and ensures that services are delivered efficiently.
* Receives reports from coordinators and monitors workload distribution.
* Manage offices, Faculty Member

### **2.4.2 Essential use-case**

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## **2.5 Business rule**

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# **3. Chapter three Proposed system**

## **3.1 Overview of the proposed system**