



# **ADDIS ABABA SCIENCES AND TECHNOLOGY UNIVERSITY**

## **College of Mechanical and Electrical Engineering**

### **Department of Software Engineering**

### **Course : Advanced Programming**

### **PROJRCT PROGRESS: ID Card Replacement System**

#### **Team 6**

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# **ID Card Replacement (Appointment) System for AASTU**

## **Students**

### **Introduction:**

The current process of replacing lost or damaged ID cards at AASTU is often cumbersome and time-consuming for both students and administrative staff. Students face challenges such as long waiting times, complex documentation requirements, and lack of transparency in the process. As a result, there is a need to modernize and streamline the ID card replacement process to better serve the student community. The proposed ID Card Replacement (Appointment) System aims to address these challenges by providing a user-friendly, efficient, and transparent solution.

### **Objective:**

The goal of this initiative is to make it easier for AASTU students to replace ID cards that have been misplaced or destroyed. The initiative is to improve the overall student experience, increase transparency, and expedite administrative operations by putting in place an effective system.

### **Theory:**

The system uses a client-server architecture with a MySQL database, Undertow for the server, and JavaFX for the user interface. Undertow is a lightweight web server designed for high-performance online applications, and the JavaFX library makes it easier to create complex graphical user interfaces. The relational database management system, MySQL, is used to store and manage departmental data, requests, documents, payment information, and student information.

### **Related Work and Design:**

The design consists of a number of different elements, such as tables, diagrams, algorithms, and flowcharts. Student interfaces, the finance department, and the ID replacement department are important parts. The organization of the database schema makes it easy to handle student information, requests, paperwork, and payment information.

## **Methods and Implementation:**

Implementation entails writing code modules that work according to the predetermined design. The system's various parts are arranged in hierarchical connections with one another. Code maintenance and comprehension are facilitated by the integrated documentation. Operating systems and compilers are examples of system needs that are specified.

## **Debugging-Test-Run:**

To guarantee the system's robustness and dependability, a thorough testing process is followed. Different testing strategies are used to find and fix any errors or problems in the code. The system is tested to make sure it works as planned and is error-free.

## **Conclusion and Future Improvements:**

The proposed ID Card Replacement (Appointment) System presents a strategic opportunity for AASTU to enhance administrative efficiency, improve student services, and modernize campus processes. By implementing this system, AASTU can streamline the ID card replacement process, reduce administrative burden, and provide a better experience for students. The project aligns with the university's goals of innovation, e