

# Campus Issue Tracking and Resolution System (CITRS)



# Problem Statement

At AUCA, students submit complaints using paper forms.

This manual process creates many challenges because complaints are easily lost, and there is no way for students to track their status.

Administrators often forget to respond, which leads to slow resolution.

Management cannot identify recurring issues because there are no reports or analytics.

As a result, students feel ignored, and problems take a long time to solve.

The university cannot improve services because it lacks data-driven insights.



# Proposed Solution



The CITRS system digitizes the entire complaint process.

Students submit complaints online, and the system automatically assigns an ID and tracks status.

Administrators can view, update, and resolve complaints through an organized interface.

Every update is logged in an audit trail for transparency.

The system also generates analytical reports that help the university understand trends and improve services.

# I Who Benefits

STUDENTS BENEFIT BECAUSE THEY CAN SUBMIT COMPLAINTS ANYTIME, TRACK PROGRESS, AND RECEIVE FASTER RESPONSES.

ADMINISTRATORS BENEFIT BECAUSE THEY HAVE A CLEAR LIST OF ISSUES, FILTERING OPTIONS, AND AUTOMATIC STATUS UPDATES.

UNIVERSITY MANAGEMENT BENEFITS BECAUSE THEY CAN IDENTIFY DEPARTMENTS WITH MANY COMPLAINTS, MONITOR PERFORMANCE, AND MAKE INFORMED DECISIONS.



# Training and Development

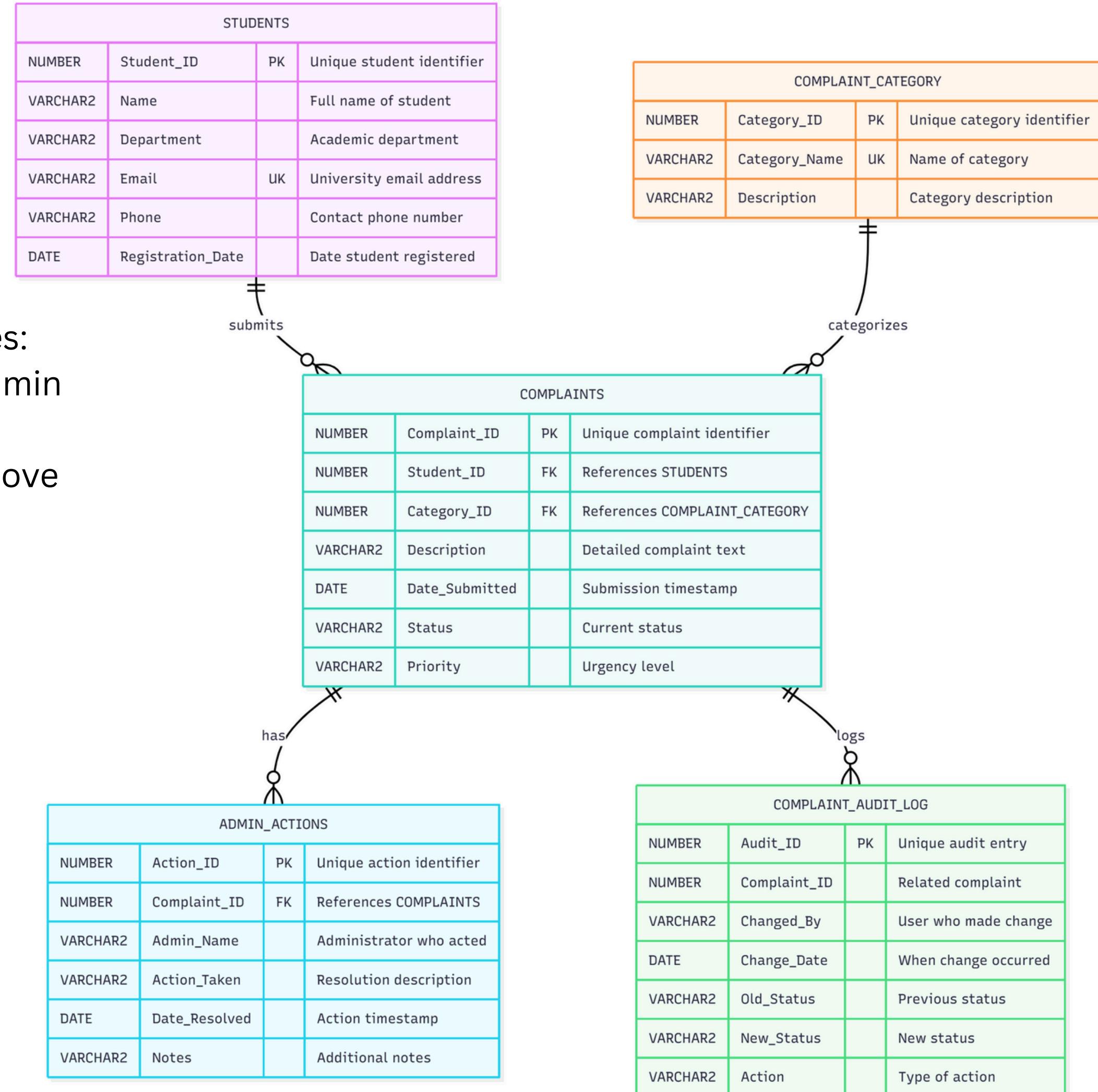
Students submit a complaint →  
The system validates the complaint →  
Complaint is stored in the database →  
Administrators review and take action →  
Triggers automatically update the status →  
All changes are logged in the audit table →  
Students view the final resolution.  
This workflow ensures accuracy, accountability, and transparency.

# Database Design

The CITRS database uses five normalized tables: Students, Complaint Categories, Complaints, Admin Actions, and Audit Log.

All tables follow Third Normal Form (3NF) to remove redundancy.

Primary keys, foreign keys, and constraints guarantee data integrity.



# Technical Implementation

The system uses Oracle Database 21c and PL/SQL programming.

Key components include:

- Procedures for submission and resolution
- Functions for analytics
- Triggers for automatic status update
- Audit trigger for change tracking
- Sequences for unique identifiers
- Exception handling for reliability



# Advanced Features

The system includes advanced automation such as:

- Automatic status update when an admin records an action
- Audit trail for every change
- Restriction rules that prevent updates on weekdays or holidays
- Clear error messages
- Secure and consistent business logic



# Business Intelligence (BI)

The system provides three main dashboards for analytical reporting:

## Executive Dashboard

Shows total complaints, resolved vs pending status, top categories, and monthly trends.

## Operational Dashboard

Displays pending complaints by priority, SLA breaches, administrator workload, and average handling time.

## Audit Dashboard

Tracks denied actions, status change history, recent audit logs, and restricted-time attempts.

These dashboards help the university:

- Reduce resolution time
- Identify recurring issues
- Improve service quality
- Allocate resources better

# Conclusion

The CITRS project successfully digitizes complaint management and improves transparency across the university.

It reduces resolution time, increases efficiency, and makes it easier for students to track their complaints.

The system provides automated processes, audit logs, and useful BI dashboards that support better decision-making.

Overall, CITRS demonstrates good database design, strong PL/SQL development, and effective reporting capabilities.