D. Y. Patil College of Engineering and Technology, Kolhapur

Department of Computer Science & Engineering

Class: SY-A

Subject: AOOC

Experiment No: 15

Group No. 33

Mini Project

Title of Mini-Project: Student Payment System

Problem Statement:

Educational institutions often face challenges in maintaining and tracking student payments efficiently. Manual record-keeping can lead to errors, duplication, and data inconsistency. There is a need for a simple desktop-based application to register students, manage their payments, and generate receipts for reference.

This mini project aims to develop a Java Swing-based 'Student Payment System' that allows users to:

- Register students with a unique ID, name, and initial payment.
- View and manage student payment records in a tabular format.
- Add additional payments to existing records.
- Generate a payment receipt for any selected student.

The system provides an easy-to-use GUI for streamlined student fee management and is particularly useful for small institutions or departments.

Introduction:

The Student Payment System is a Java-based desktop application that simplifies the process of managing student fee payments. It enables institutions to digitally store and track each student's payment information using a graphical user interface (GUI) built with Java Swing. This eliminates the need for paper-based record keeping and reduces errors associated with manual entry.

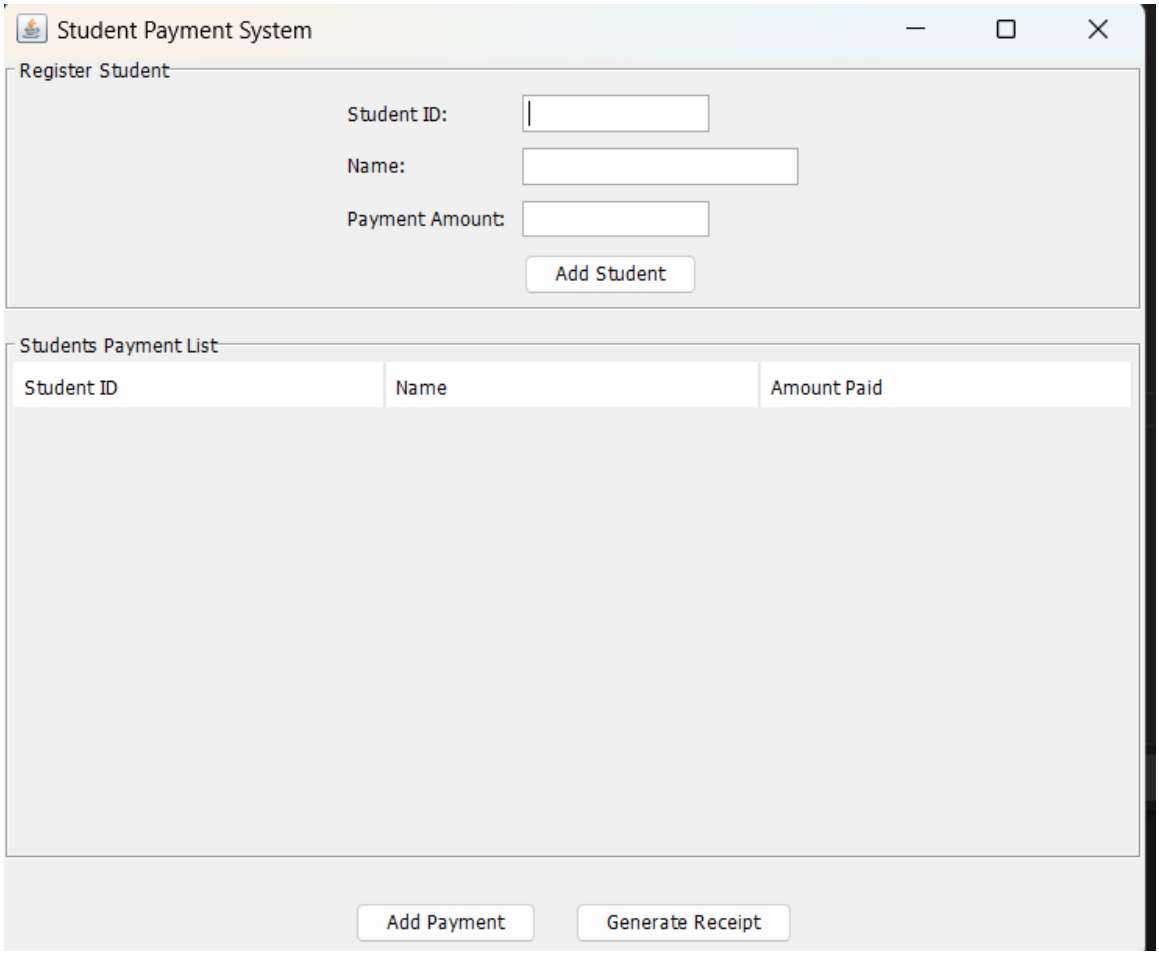
System Architecture:

The system is based on a simple MVC (Model-View-Controller) inspired architecture:
- Model: The `Student` class stores the data (ID, Name, Amount Paid).
- View: The GUI built with Java Swing components like JFrame, JTable, JTextField, etc.
- Controller: Action listeners that handle input, perform validation, and update both the model and the view.

Module description or working of system:

1. Student Registration: Users can register a new student by entering their ID, name, and an initial payment.
2. Payment Management: Existing students can be selected and additional payments can be added.
3. Receipt Generation: The user can select a student and generate a detailed payment receipt showing the ID, name, date, and total amount paid.
4. Data Display: All registered students and their payment status are shown in a non-editable table.

Screenshots:



Group Members:

Unique id	Roll no	Name of Student	Sign
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EN23246527	139	Yash Ganesh Ghatage	
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