

STUDENT GRADING SYSTEM

Project Report

Introduction

This Student Grading System is a desktop application developed in Java using Swing. It provides essential functionality to handle student records, courses, and grade assignments in a streamlined and user-friendly environment.

Core Objectives

The primary aim of this system is to provide an efficient way to:

- Register students and courses
- Assign grades
- View academic performance reports

Technologies Implemented

- Java Programming Language
- Swing for GUI development
- Object-Oriented Programming principles

Project Architecture

The application follows a modular design, separating GUI, logic, and data layers. It is divided into three key packages: model, manager, and gui.

Key Components

Main.java

Acts as the entry point. It sets up the initial frame and launches the main menu.

Model Package

Includes the fundamental data structures:

- Student.java - Contains student ID, name, and enrollments
- Course.java - Holds course name and unique code
- Enrollment.java - Represents the connection between student and course with grade

Manager Package

GradingSystem.java is the core controller handling business logic, like adding records, grade assignment, and retrieval.

GUI Package

- AddStudentPanel - UI to register new students
- AddCoursePanel - UI to register new courses
- AssignGradePanel - UI for assigning grades
- ReportCardPanel - Displays report card for each student
- MainMenuPanel - Central navigation interface

How to Use the System

1. Launch the application via Main.java
2. Navigate through the Main Menu to perform operations
3. Add students and courses, then assign grades
4. View student performance through the report card panel