

Student Report Generator

Presented by:-

2310030123-Siddarth

2310030108-santhosh

2310030130-Afraz

2310030292-shashank

Introduction to the Online Quiz System:

- The Student Report Generator is a user-friendly application designed to manage student records and generate detailed reports
- It utilizes Java Collections such as List and Map for efficient storage, retrieval, and manipulation of student data.
- The system provides a seamless experience for administrators to add, edit, delete, and view student records, as well as generate reports with calculated grades and statistics.
- It automates calculations like total marks, averages, and grades, making it ideal for academic and administrative purposes.


Key focus areas:

- Object-Oriented Design
- Clean and maintainable code
- Practical use of design patterns (e.g., Singleton, Factory, and Strategy)

Problem Statement: Student Report Generator

Objective:

Design and implement a Student Report Generator application using Java. The application should allow users to manage student records and generate reports, leveraging Generics and the Collections Framework for efficient data handling.

 REPORT CARD School Name						
Sheet No: _____						
Student Name: _____		Class/Section: _____				
School Year: _____		Teachers Name: _____				
SUBJECTS	1st Term	2nd Term	3rd Term	Total	Obtained	Grade
MATH						
SCIENCE						
ENGLISH						
FOREIGN LANGUAGE						
READING						
SPELLING						
SOCIAL STUDIES						
PHYSICAL EDUCATION						
Terms Based Grade				1st	2nd	3rd
Quarterly Grade						
Average Grade						
TEACHERS FEEDBACK						

Total School Days: _____						
Attendance: _____						

Software Requirements

- Software Requirements for Student Report Generator. The following are the software requirements to design and implement the Student Report Generator using Java with Generics, Collections Framework, and appropriate Design Patterns.
- **Functional Requirements;**
 - Add, view, edit, and delete student records.
 - Generate reports with total marks, averages, and grades.
 - Search, filter, and sort records (e.g., by name, roll number, or marks).
 - Export reports to a file (optional).
 - Use Design Patterns: Singleton, Factory, Strategy.
- **Non-Functional Requirements Performance:**
 - Efficient handling of large datasets.
 - Scalability: Support future features and database integration.
 - Usability: Simple and intuitive menu-driven interface.
 - Maintainability: Clean, modular, and reusable code.

Student Report Generator Features:

- Personalized Data:
 - Name, ID, Grade Level, Teacher, Term
- Performance Overview:
 - Grades by Subject, Progress Tracking, Class comparison.
- Attendance Tracking:
 - Absences, Attendance % & Remarks
- Behaviour & Participation:
 - Classroom Behaviour, Extracurriculars, Teacher's Feedback
- Skills & Competencies:
 - Strengths, Areas for Improvement, Soft Skills, Test Scores
- Remarks & Feedback:
 - Teacher Comments, Parent Feedback, Goals for Next Term

Thank You..