

Simple Student Management System

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1. Introduction

This project is a simple Python program that helps store student names, roll numbers, marks, and show a report. It is made using the basic Python concepts taught in class.

2. Problem Statement

Teachers need an easy tool to keep basic student information and marks. The program should be simple and run in the terminal.

3. Functional Requirements

- Add student (name + roll)
- Add marks (subject + marks)
- Show student list
- Show performance report

4. Non-Functional Requirements

- Easy to run
- Beginner-level Python code
- Works in any terminal

5. System Architecture

The program runs in one Python file.

Data is stored using:

- List of students
- Dictionary for marks

Input → Process → Output

6. Design Diagrams

(Write these points, no need to draw fancy diagrams)

****Use Case:****

User → Add Student, Add Marks, Show Students, Show Report

****Workflow:****

Menu → Choose option → Enter data → Output shown

7. Implementation Details

Main functions:

- add_student()
- add_marks()
- show_students()
- show_report()
- menu()

The program uses lists and dictionaries only.

8. Screenshots

(Attach two screenshots)

1. VS Code with code open
2. Terminal running the program

9. Testing

Tested by:

1. Adding two students
2. Adding marks for one student
3. Checking the report output

10. Challenges Faced

- Understanding how to store data in lists and dictionaries
- Making sure the menu repeats properly

11. Learnings

- Basic Python coding
- Functions and loops
- How to structure a simple project

12. Future Enhancements

- Save data using files (CSV)
- Add editing and deleting students
- Add GUI in future

13. References

- Python official documentation
- Class notes