

# Simple Student Management System  
Author: Devansh Chaubey  
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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.

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## ## 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.

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## ## 3. Functional Requirements

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

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## ## 4. Non-Functional Requirements

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

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## ## 5. System Architecture

The program runs in one Python file.

Data is stored using:

- List of students
- Dictionary for marks

Input → Process → Output

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## ## 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

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## ## 7. Implementation Details

Main functions:

- add\_student()
- add\_marks()
- show\_students()
- show\_report()
- menu()

The program uses lists and dictionaries only.

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## ## 8. Screenshots

(Attach two screenshots)

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

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## ## 9. Testing

Tested by:

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

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## ## 10. Challenges Faced

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

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## ## 11. Learnings

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

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## ## 12. Future Enhancements

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

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#### ## 13. References

- Python official documentation
- Class notes