# STUDENT GRADE ANALYZER PROJECT PRESENTATION

## COURSE: INTRODUCTION TO PROBLEM SOLVING

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# ⭐ SLIDE 2 — Problem Definition

- Students ke marks ka manually average aur grade calculate karna time–consuming hota hai.
- Human calculation me mistake ka chance hota hai.
- Manual data manage karna mushkil hota hai.
- Therefore, ek simple automated tool ki zaroorat hoti hai jo grades & top student automatically bata sake.

# ⭐ SLIDE 3 — Project Objectives

- Student marks ko store karna
- 3 subjects ka average calculate karna
- Performance ke basis par grade assign karna
- Class ka top student identify karna
- User-friendly menu provide karna
- Basic programming concepts ka practical implementation

# ⭐ SLIDE 4 — Features of the System

- Student ka naam + 3 subject marks add karna
- Automatic average calculation
- Grade assignment based on marks
- All students ka list display karna
- Highest average wale student ko show karna
- Simple console menu (1-4 options)

# ⭐ SLIDE 5 — System Design (Top-Down Approach)

- Program 4 main functions me divide hai:
- add_student()
- Name aur 3 marks input leta hai
- Average & grade calculate karke store karta hai
- view_all()
- Saare students ke naam, average aur grade show karta hai
- top_student()
- Highest average wale student ko find karta hai
- menu()
- User ko options deta hai (Add/View/Top/Exit)

# ⭐ SLIDE 6 — Algorithm (Step-by-Step)

- Start
- Menu display karo
- User choice input lo
- Agar choice = Add → Student add karo
- Agar choice = View → All students dikhao
- Agar choice = Top → Top scorer dikhao
- Agar choice = Exit → Program stop
- End

# ⭐ SLIDE 7 — Implementation Details

- Language: Python
- Concepts used:
- Lists
- Dictionaries
- Conditions (if–elif–else)
- Loops
- Functions
- No external libraries used
- Simple console-based design

# ⭐ SLIDE 8 — Testing

- Testing Steps:
- Case 1: Correct marks input → average & grade check
- Case 2: Multiple students → list display properly
- Case 3: Same marks → correct grade
- Case 4: Top student logic check
- Case 5: Invalid input → error message show
- System passed all basic tests successfully

# ⭐ SLIDE 9 — Conclusion

- Program basic programming concepts ko strongly demonstrate karta hai
- Automated grade calculation real-life use ke kaam aata hai
- Easy, modular, and understandable structure
- Students ki performance analyze karne me helpful tool

# Thank you very much!