MEMBER 7: USER INTERFACE, INTEGRATION & STUDENT PERFORMANCE ANALYSIS

Name: S.BHAVANI

Main Responsibility

Develop the **user interface**, integrate all Java modules, and perform **student performance analysis**.
This member makes the system **usable, integrated, and insightful**.

Role Overview

Member 7 is responsible for:

- How users interact with the system

- How all modules work together

- How student academic data is **analyzed and presented meaningfully**

This member turns raw data into **useful insights**.

Responsibilities (Java UI + Analysis Tasks)

1. User Interface Development

- Create UI using:

    o Java Swing / JavaFX (desktop)

    o HTML & CSS (web version)

Purpose:
To provide a clean and user-friendly interface.

2. Event Handling Logic

- Write code for:

    o Button clicks

    o Form submissions

    o Page navigation

Purpose:
To convert user actions into backend operations.

3. Backend Integration

- Connect UI with:
    - Student Management
    - Subject Management
    - Attendance
    - Marks & Result
    - Backlog modules

Purpose:
To ensure smooth data flow across modules.

4. Login & Role-Based Access Control

- Implement login functionality
- Define roles:
    - Admin
    - Faculty
    - Student
- Restrict UI features based on role

Purpose:
To ensure secure and role-specific access.

5. Student Performance Analysis (Assigned Task)

- Analyze student academic data using Java logic:
    - Subject-wise performance
    - Semester-wise performance
    - Pass/fail trends
    - Backlog patterns
- Identify:
    - High-performing students
    - Average performers
    - At-risk students

Purpose:
To evaluate and understand student academic progress.

6. Performance Reports & Visualization

- Display performance analysis through:

    o Tables

    o Charts

    o Summary reports

- Show insights like:

    o GPA trends

    o Subject difficulty analysis

Purpose:
To help faculty and students make informed decisions.

7. Module Integration & Final Testing

- Integrate all modules into one system

- Test UI flow and data accuracy

- Ensure correct analysis results

Purpose:
To deliver a complete and reliable application.