

MEMBER 5 – BACKLOG MANAGEMENT (JAVA DEVELOPMENT)

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Main Responsibility

Develop and manage all **Java code related to backlog detection, recording, and tracking.**

This member handles **failed subjects and pending academic requirements** for students.

Role Overview

The Backlog Management Module keeps track of **subjects a student has not cleared** due to:

- Insufficient marks
- Attendance shortage

This module ensures accurate backlog records and supports future clearance tracking.

Responsibilities (Java Development Tasks)

1. Backlog Class Design

- Create a Backlog Java class
- Store:
 - Roll Number
 - Subject Code
 - Semester
 - Backlog Reason (Marks / Attendance)
 - Clearance Status

Purpose:

To represent each backlog as a Java object.

2. Backlog Service Logic

- Create a BacklogService Java class
- Implement logic to:

- Add new backlog entries
- Update backlog status
- Retrieve backlog information

Purpose:

To manage backlog-related operations.

3. Backlog Detection Logic

- Automatically detect backlogs using:
 - Marks data (from Marks module)
 - Attendance data (from Attendance module)

Purpose:

To identify failed subjects without manual intervention.

4. Backlog Recording

- Record details such as:
 - Subject name
 - Semester
 - Reason for backlog

Purpose:

To maintain clear and structured backlog information.

5. Backlog Clearance Tracking

- Update backlog status when a subject is cleared
- Mark backlogs as:
 - Pending
 - Cleared

Purpose:

To track student progress over time.

6. Backlog History Maintenance

- Maintain complete backlog history for each student

- Allow retrieval of past and current backlogs

Purpose:

To support academic review and decision-making.