

## **MEMBER 4 – MARKS & RESULT CALCULATION (JAVA DEVELOPMENT)**

**Name:** K.Tarun

### **What this member actually does**

Member 4 is the person who **decides student results.**

They write Java code that:

- Takes marks
- Calculates totals
- Decides pass or fail
- Assigns grades
- Generates semester results

In short: **this member controls how results are produced.**

### **1. Handling Marks Data**

This member creates a Java class called Marks.

#### **What it stores:**

- Student roll number
- Subject code
- Internal marks
- External marks

This ensures marks for every student and subject are stored properly.

### **2. Entering Marks**

This member writes Java logic to:

- Enter internal marks (mid exams, assignments)
- Enter external marks (final exam)
- Check if entered marks are valid (not negative, not above max)

This prevents wrong marks from entering the system.

### **3. Calculating Total Marks**

Using the entered marks, the system:

- Adds internal + external marks
- Calculates total marks automatically

This removes manual calculation errors.

#### 4. Pass or Fail Decision

This member writes logic to:

- Check if student meets minimum required marks
- Decide whether the student **passed or failed** in each subject

This decision is fully automated and rule-based.

#### 5. Assigning Grades

This member creates a GradeCalculator class to:

- Convert total marks into grades (A, B, C, etc.)
- Ensure grading follows predefined rules

This gives clear academic evaluation instead of only numbers.

#### 6. Generating Semester Results

Finally, this member generates:

- Subject-wise marks
- Grades
- Pass/Fail status
- Overall semester result

This produces the **final academic report** for students