

## **Student Marks Processing**

### **1. OBJECTIVES:**

On completion of the case study the participant should be able to:

- Connectivity with Oracle database
- Apply Transaction management with database

### **2. PRE-REQUISITES**

- Database Programming- Oracle SQL, PL/SQL

### **3. SKILLS/CONCEPTS**

- Implementation and Integration skills to solve this case

### **4. DURATION IN HOURS**

- 3 HRS

### **5. SCENARIO**

XYZ college automates its Students marks system to print required Marks sheets at the end of their course. You are required to maintain the Master data of students and Marks of students for different years. Assume that each year student studies only 3-subjects and only Course is offered in the college. The duration of the course is 4 years. Assume that you are working the solution at the end of the course. (ie the processing at the end of 4-years study)

Provide a solution for printing Memo of Marks for each year and a Consolidated Marks sheet. Check whether a student is Passed or Failed in every subject. You need to calculate total scores per year and provide division per each year and also provide Total score at the end of the course and Final Grades.

- Identify the tables, attributes and define them with relations
- Write the DB script to maintain above process.
- Implement this in the form of Procedures and functions, and Triggers.

### **6. DELIVERABLES**

- a. Normalized Tables( up to 3NF)
- b. Table definitions with Relationships
- c. Applying Integrity constraints
- d. Defining the re-usable components
- e. Handling suitable exceptions
- f. Implement the solution with suitable Packages, Procedures, Functions, Cursors etc
- g. Implementing the Database triggers