**Software Laboratory – IV**

**Problem Statement: Employee management**

**Part - I**

Many employees are working in a Company. As per rule these employees cannot work for any other company while in the job. An employee can be a worker, a supervisor or a manager (Other roles are not covered for simplicity). Company maintains record for each employee. Each employee record has a unique employee Id, name(title + first name + middle name + last name) and an address. Address consists of a house number, road, ward no and pin code. Employee record is maintained even for those employees who have left the service (for retirement benefits).

Each employee gets a monthly salary. The worker will get the salary as basic pay and additional daily allowance (based on attendance), the supervisor gets a basic pay and supervision allowance and manager gets a basic pay, a grade pay as 50 percent of basic pay and 30 percent of basic pay as travel allowance. Each employee marks her daily attendance in an attendance register. Employee is paid her salary proportional to her attendance.

On 1st of every month the Accounts department of the company computes the salary of all the employees for previous month. For calculating the salary, Accounts department gets the attendance details (total no of days for which each employee is present in a month) from the attendance register. The Accounts department transfers salary through Bank Money Transfer (BMT) facility of Bank and generates a consolidated statement of salary as employeeId, employee name, employee bank account, and the amount deposited in that account.

**Part – II**

What kind of queries/ transactions will be required?

1. Add Employee to EMS (new Employee joins). Add Employee to Attendance register also.
2. Mark employee record when employee is released. (not removed)
3. Remove employee record from attendance register after employee leaves the company.
4. Employee wants to record attendance once a day.
5. Accounts department computes salary for each employee.
6. Accounts department makes a salary payment to each employee and transfers salary to account using bank (BMT) gateway.
7. Accounts department generates a total salary payment report.
8. Mark attendance in the register.

**Part - III**

For yearly performance appraisal Worker reports to supervisor, supervisor reports to manager. Manager reports another manager or none.

A performance assessment cycle starts when HR department starts the appraisal cycle in the Appraisal system. Once started Appraisal system is available to all employees for making self-assessment. As a self-apraisal, each employee has to mark a self-rating (1-5) in the system based on her self-assessment. After self-assessment the employee-appraisal is available to reporting officer (Appraiser) to mark appraiser’s rating (1-5). After appraiser’s rating is complete, employee-appraisal is available to the HR system for computing the Pay revision and Promotions. For simplicity the rule for pay revision is 10% increment in Basic if the appraiser’s rating is 3 to 5. Promotion rule is if the Appriser’s rating is 5 then worker becomes supervisor and supervisor becomes Manager. Managers simply get 10% additional basic pay in place of promotion..

Use cases

1. Enroll new employee
2. Relieve Employee
3. Mark attendance
4. Distribute Salary