MANAGEMENT INFORMATION SYSTEM

LAB EXPERIMENT:9

9) A college has more than thousand security persons, who are instructed to give duties at different places within the campus. Additionally, they also maintain a routine, which contains all information, such as Date, Duty Start Time, Duty End Time, and Place. Most importantly, all the places are covered by at least one security person. If a security person takes leave, manual entry is done against that person. Finally, at the end of a month, the security persons get paid for their duties, while considering the number of leaves as well. You can see that the manual calculation/operation is a heavy task for the security manager. Therefore, the objective is to build an Online security management system using class diagram through which entire security system within the campus can be controlled in an efficient manner

Aim:

To develop a **UML Class Diagram** for an **Online Security Management System** to efficiently manage the security personnel, their schedules, leave records, and salary calculations.

Procedure:

- **Requirement Analysis**
    - Identify system requirements (duty allocation, leave management, payroll).
    - Understand security manager's needs and challenges.
- **System Design**
    - Create a **Class Diagram** with key entities:
        - **SecurityPerson** (ID, Name, Contact, Salary, LeaveCount)
        - **DutySchedule** (Date, StartTime, EndTime, Place, AssignedPerson)
        - **LeaveRecord** (PersonID, LeaveDate, Reason)
        - **Payroll** (PersonID, TotalDuties, Deductions, FinalSalary)
- **Database Design**
    - Develop tables to store security personnel details, duty schedules, leave records, and payments.
- **User Interface Design**

- - Create dashboards for the security manager to assign duties and track leave.
- Provide login access for security personnel to check their schedules.

- **Duty Allocation & Leave Management**

  - - Automate duty assignment ensuring all places are covered.
  - Allow leave requests with automatic adjustments.

- **Payroll Processing**

  - - Calculate salaries based on duties performed and leaves taken.
  - Generate monthly salary reports.

- **Testing & Implementation**

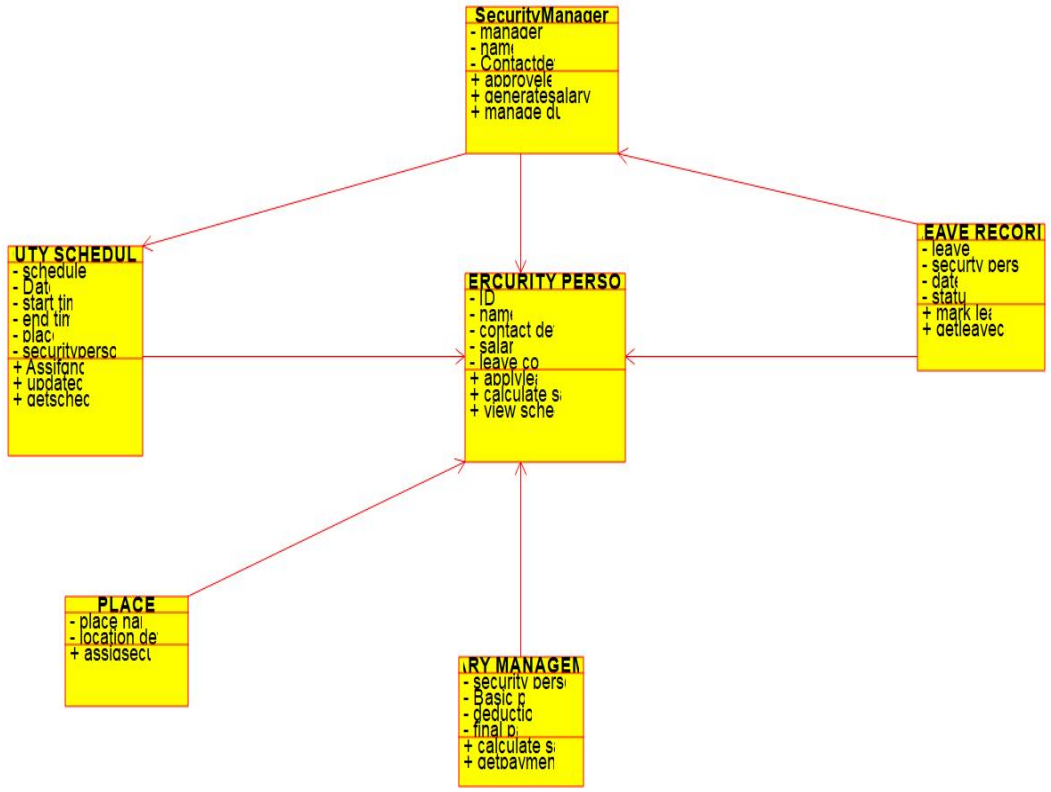
  - - Conduct testing to ensure system accuracy.
  - Deploy the system for real-time use.

- **Maintenance & Updates**

  - - Regularly update the system for improvements and bug fixes.

Output:

Class diagram



Result:

A **UML Class Diagram** will be created to visualize the **Online Security Management System**.