Exercise 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

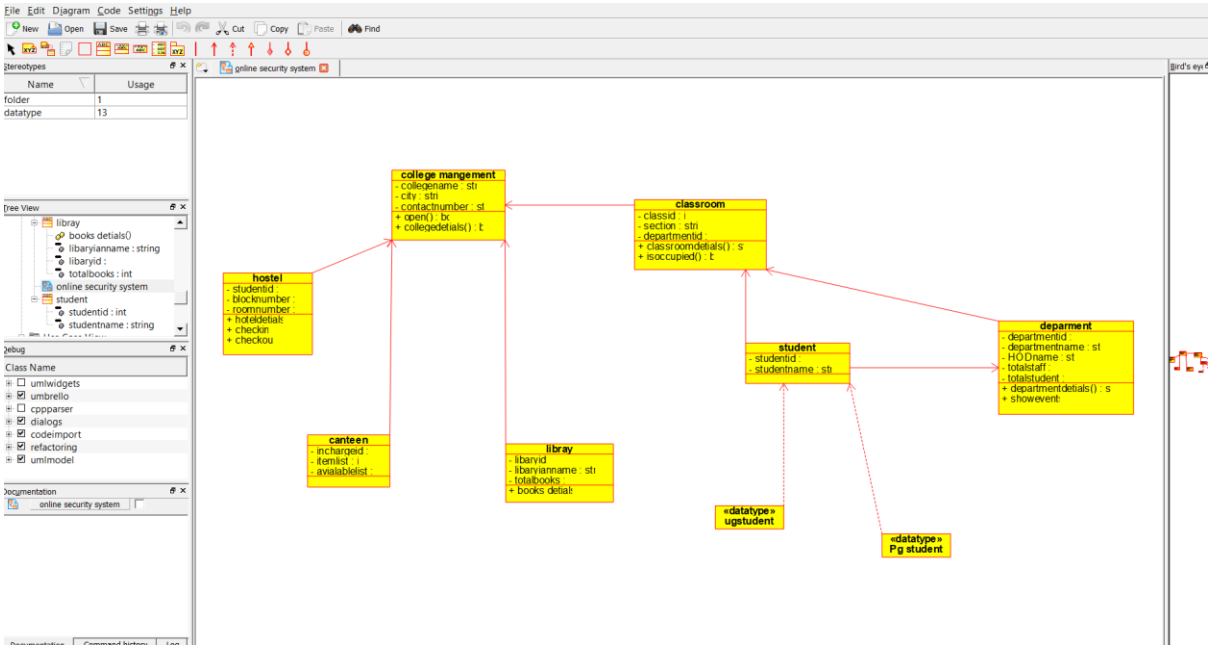
Aim

The objective of this project is to develop an Online Security Management System for a college campus to streamline and automate the management of security personnel, their duty schedules, leave records, and salary calculations. By replacing traditional manual processes, the system aims to enhance transparency, minimize human errors, and improve the overall efficiency of security operations.

Procedure

1. Requirement Analysis – Identify key system entities, including Security Personnel, Duty Schedules, Leave Records, and Payment Processing, while defining essential system functionalities.
2. Class Diagram Design – Develop a structured class diagram, specifying relevant classes, attributes, methods, and relationships to represent the system architecture.
3. Database & System Design – Establish a well-structured database with tables dedicated to storing and managing duty schedules, leave records, payroll data, and security staff details.
4. Implementation – Develop a web-based application that facilitates duty scheduling, leave tracking, payroll computation, and real-time monitoring of security personnel.
5. Testing & Deployment – Conduct thorough testing to ensure system reliability, security, and functionality before deploying it for active use in campus security management.

Output



Result

Thus the UML diagram for the College Online Security System has been implemented successfully.