

Project Topics

Software Engineering Lab

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Department of Computer Science and Engineering

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P05: Online Campus Security Management System

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IIT Kharagpur 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 through which entire security system within the campus can be controlled in an efficient manner.

Inputs:

- User Information
 - Security – (Name, Identity Number, Password)
 - Total number of security persons
 - Manager – (Name, Identity, Password)
- Place Information
 - Number of places identified by unique numbers

Operations:

- Security Person
 - Log-In
 - View duty date, place, start time, end time (upcoming 7 days schedule can be viewed)
 - Request manager to take leave or to do over duty
 - Request approved/declined
 - Number of leaves taken/ number of allowed leaves remaining
 - Log-Out
- Manager
 - Log-In
 - Create routine for upcoming 7 days for all persons considering leave requests
 - Approve/decline leave request
 - Monitoring
 - Log-Out

Outputs:

- Salary at the end of the month
- View routine

Constraints:

- All users MUST register themselves into the system.
- A security person can only check his/her own routine.
- Manager can check the status of all security persons.
- A fixed number of leaves are allowed. Beyond that, fixed amount will be deducted as fine.
- All security persons get same number of duties in a month.
- Adequate number of security persons are there to cover all places considering leave requests.
- A security person must not have duties in two different places at the same date and time.