**CSE 216**

**Practice for Entity Relationship Modelling**

**University Hall Management**

In a university, there are multiple numbers of halls for the students. A hall can only be for male or female. Each hall contains specific number of rooms for allotting to the students. Each room of a hall is labelled with a specific room number and has a specific capacity (number of seats), location (floor number, wing (north, South etc.)). A room is allotted to multiple numbers of students according to room capacity. A room can be kept without allotment to any student if necessary. You have to store all history of rooms i.e., who occupied the room at certain month and year. Students can change their rooms during their period of stay at the rooms. You have to store all historical data of a student regarding room occupancy.

Each student has a unique id, name, gender, contact numbers and is assigned to a particular hall. But all students may not be assigned a room in the hall. In that case, he or she will be treated as attached student. Residential students can change their rooms with the permission of the provost. The annual fees for residential students are different than the attached students. The components of annual fees are as follows:

|  |  |  |
| --- | --- | --- |
| Component name | Amount | Year |
| Hall room fee (Residential student) | fffffff | YYYY |
| Hall fee (All student) | ffffff | YYYY |
| Library (All student) | ffffff | YYYY |
| ……. | …. | …. |
|  |  |  |

Each hall is managed by a provost and three assistant provosts. Each provost and assistant provost is appointed for duration (start date and end date) and these histories have to be stored. Provost or Asst. Provost must be from the teachers who has teacher id, designation and department. A provost must be from among the professors and Asst. Provost from Associate Professors or Asst. Professors. No lecturer can be appointed as provost or Asst. Provost. A teacher can be appointed as provost or asst. provost in multiple times.

Each hall also has some support staffs such as office assistant, sweeper, cleaner, security guard, etc each staff has an id and contact address.

Hall organizes many internal events every year under the supervision of provosts and the participants are all students of that hall (attacherd or residential). A student can participate more than one events. An event will have an event id, name, venue, start date and end date. University organizes foot ball, cricket etc. matches among halls. Each hall forms teams for different matches in different years among the students and each team has a leader from the team mates.

Some requirements:

Who was the team leader for foot ball team of Ahsan Ullah Hall in 2008?

Find the list all provost of all halls during the period of year 2000 to 2006.

Find the room history of student id “123”.

Find the name and designation of the provost who was the supervisor of the event id ‘e1’ of Rashid Hall.

Task 1: Underline all Entity sets

Task 2: Draw Entity-Relationship Diagram (ERD)

Task 3: Transform the ERD into relational schemas