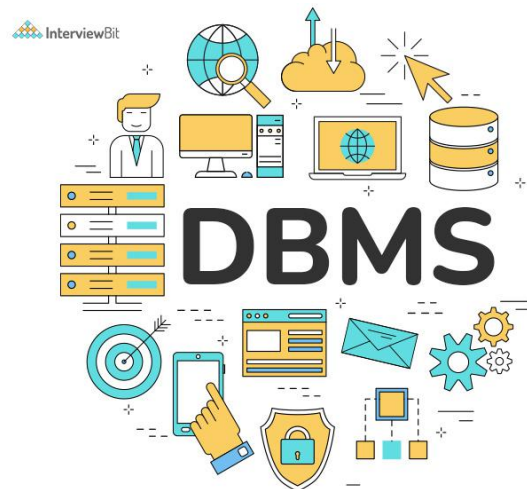


Mini Project



Application description: *The application needs to be developed for IIT Patna Campus Amenities Administration. The administration needs to keep track of many services for their users. The detailed specifications are not available, however there are some minimum points that you need to consider for this project.*

- *There are different kinds of service possibly based upon the type of amenity or facility we are referring to (such as services related to guest house, market shops, etc).*
 - *Guest House Related Service: Such as handling room booking request, food booking, bill generation, staff duty scheduler, etc*
 - *Market Shop Related Services: Such as maintaining records for shop keepers, license period, extension period, monthly rent/electricity details, feedback/performance management, etc*

Project requirements:

Task 1. E-R Model

- Construct an E-R diagram representing the conceptual design of the database.
- At minimum you must include all the entity and relationship sets implied by the aforementioned description. You may go beyond the minimum.
- Be sure to identify primary keys, foreign keys, relationship cardinalities, etc.

Task 2. Relational Model

- After creating an initial relational design from your E-R design, refine it based on the principles of relational design we have studied in the course.
- Create the relations using MySQL database you used for earlier assignments.
- Create indices, constraints, triggers as appropriate.
- If you refine your design, you may discover flaws in the E-R design, go back and change it. Your final E-R design must be consistent with your relational design.

Task 3. Populate Relations

- Include enough data to make answers to your queries interesting and nontrivial. There is no need for overkill in this regard.
- You may write a procedure to generate input data.

Task 4. Sample Queries:

You should run a number of test queries to see that you have loaded your database in the way you intended. The queries listed below are those that the users may want to use frequently. You can plan to write function/procedures/triggers/queries to address the followings.

- Guest House related
 - o Monthly bookings for the guest house in different categories
 - o The total monthly expenditure for the guest house
 - o Generation of bills
 - o Availability of room
 - o Monthly food billing
- Market Shop related
 - o Current shop details of different areas of the campus
 - o Details of shop keepers and their security pass validity
 - o Reminders for expiring license agreement period
 - o Pending charges from each shop
 - o Summary of performances of each shop

