Project Proposal

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This document outlines our proposal for a database system to manage a hotel. Individual contribution amongst ourselves was even; each one of us contributed 25% towards the proposal.

StayHere Hotel
There is a hotel called StayHere Hotel. The scope of this database includes the hotel rooms, its current guests, the employees that work there, and the requests made by the guests during their stay. Salaries, payments, and group reservations are also out of scope for this example.

Business Rules
1. The hotel will consist of multiple floors containing multiple rooms to house guests
2. Each floor is made up of guest rooms and amenities, and are identified by a floor number.
3. Each room must have a room number, room type, daily room cost, ~~number of beds, bed size~~, occupancy, floor number, and a reservation id.
4. Each guest ~~must have an order number~~ has a booking id, guest id, name, ~~gender, phone number,~~ date of birth, email, ~~password,~~ address, ~~and membership level,~~ requests, and room number.
5. Each employee must have an employee id, name, gender, phone number, date of birth, email, ~~password~~, address, role.
6. Each Manager must have an employee id, name, phone number, assigned group of employees to manage, and a group of floors they are in charge of
7. Each Housekeeping member has an employee id, name, a currently assigned floor which they are cleaning, and a specific room which they are cleaning if a request is made
8. Each Room Service Staff member has an employee id, name, room number for the request, and request details
9. Each reservation must have a booking id, ~~stay duration~~, rooms rented, ~~guest name~~ name of reserver, check-in date/time, and check-out date/time.
10. ~~Guest~~ Requests have a date and time issued, a request id, a ~~guest name~~, a room number, request specifications, and date and time when the request was fulfilled if at all

Major Entities
1. Employee: refers to an individual who provides the service to the guest or hotel. They interact with the hotel guests by providing services to them. They are also given the room numbers for the guests so that they may deliver these services to the correct location.
2. Room: refers to individual rooms within the hotel where guests are housed for their stay. Rooms are assigned to a number of guests who are reserved for them. Employees also use rooms to identify which guests currently need service or assistance.
3. Guest: a person who pays for a room at the hotel overnight. A guest can make a request to an employee for a service the hotel provides.
4. Reservation: refers to a booking by a guest to obtain an open room at the hotel based on whether it suits the guest's needs.
5. Request: refers to a request sent by a guest to hotel staff to obtain some service provided by the hotel such as room service or housekeeping. These requests are

given to employees who then handle these tasks and are given specific rooms where these tasks are to be performed.

Assumptions on how many tables and relationships will be discovered

We assume that there will be approximately 9 tables or more given for the number of different categories that must be tracked. Assuming each of these tables will have a relationship with 2 - 3 of the other tables, as well as with other minor entities not mentioned here, we assume that approximately 10 to 15 relationships will be discovered.

Assumptions on volumes of data:
We estimate that we will have 12 floors with 120 rooms total. On any given day there will be approximately 300 guests staying at our hotel, which will be serviced by 80 employees.

Summary:
Our database system will help the owner(s) of StayHere Hotel manage the operations of the hotel. It will facilitate actions such as room registration and checking in to the hotel. The database will also be used to catalog guests of the hotel and their various requests to the hotel. Additionally, it will store information on what tasks employees are currently assigned as well as optionally storing data on which room and/or floor they are working on in order to further streamline activities like room service and housekeeping.