IS230: Introduction to Database Systems

Project Part 1

**The project will be carried out by groups each containing AT MAXIMUM Five students.**

**Remark**: should use the project report (Template I)

Draw an ER Diagram for the following:

You were brought in to design the database system for a Famous Hotel chain with many branches. Every hotel branch should have an ID, a name, and an address, and it should automatically keep track of the number of available rooms. Every hotel has many employees that only work at one branch, one employee is also the hotel’s manager. The system should record the name, SSN, and salary of each employee. Each hotel has multiple rooms. Rooms must belong to a hotel, and every room is identified by its room number, we use standard room numbering conventions (e.g. room 205 is the 5th room on the 2nd floor), and we store the room’s type (single, double, king, suite …etc).

The system also has a record of all the customers and their name, date of birth, and AccountID number. Customers can rent rooms and the system should store the date of arrival and the duration of the stay (number of nights) as well as the customer’s payment amount for each visit. Lastly, a customer can refer other customers to our hotels, when a new customer is registered they can enter the ID of the customer that referred them, which should be reflected in our database.

Write down any assumptions you make.

**Part I**):

1. Use the report template to submit the group’s work and complete each of the required sections carefully to not lose marks.
   * Section#1 is the ER resulting from the above project statement. you can draw it by hand or use any drawing software (SUGGESTION: use [https://erdplus.com/)](https://erdplus.com/)
   * Section#2 is to adapt the resulting ER from section#1 to be drawn using MySQL Workbench.
   * Section#3 is exporting the SQL script to generate a database.
2. Use the MySQL Workbench tool to draw the requested ER diagram in Section#2 taking into account the following:
   1. Choose a convenient domain for each attribute (like INT or .
   2. Specify key attributes for each entity type as well as cardinality ratio and participation constraints for each relationship type.
3. The group report should be uploaded to the blackboard by the group leader ONLY.

**ANY STUDENTS CAUGHT CHEATING WILL RECEIVE ZERO IN THIS AND ALL PROJECTS AND WILL BE REPORTED AND POSSIBLY FAIL THE COURSE!**

**مع التمنيات بالتوفيق والنجاح**