**PRACTICAL - 12**

**AIM:**  **Data Dictionary and E-R Diagram**

Suppose that as the database administrator (DBA) in a hotel, you have to set up a database to capture all the following information that the hotel needs to maintain.

• The hotel offers three types of ROOMS, including single room, double room, and triple room. Every room is Identified by its unique number.

• Every employee at the hotel is either a receptionist, a cleaning staff, or a kitchen staff. Each RECEP-TIONIST is identified with her/his name, employee number and years of experience. Receptionists are responsible for ensuring the room is clean before the room is assigned to the guest. Thus, they assign a single CLEANING STAFF to clean each room every morning and/or whenever it is required. Note that the same room may need to be cleaned several times on the same day, before it gets reassigned. For each cleaning assignment, the date and the status need to be provided. The KITCHEN STAFF is characterized by their specific responsibilities, e.g. being a cook or a waiter. The cleaning staff and the kitchen staff are also uniquely identified by their employee number.

• Receptionists welcome GUESTS and upon presentation of their valid traveling documents, they allocate a unique room to each guest and specify one group of facilities which is accessible to the guest during his stay. Guests are uniquely identified with their passport number but other necessary information are also recorded about the guests, including: name, phone numbers, arrival date, departure date, and credit card number. Each FACILITY GROUP contains specific set of facilities, e.g. the bar or gym, in order to be used by the guests. The arrival and departure dates of a guest will in turn determine the occupation of a specific room.

• A guest can be accompanied with one person to have a double room or at most two people for a triple room. Each ACCOMPANYING person is identified by his/her name.

**12.1: Design Data Dictionary for above problem.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity** | **Attributes** | **Data Type** | **Length** | **Constraint** |
| **Room** | Room No.  Room Type | Number  Varchar2 | 5  20 | PrimaryKey  Not Null |
| **Guest** | Name  Details  Passport No.  Phone No. | Varchar2  Varchar2  Number  Number | 20  30  15  10 | Not Null  -  PrimaryKey  Not Null |
| **Facility** | Name | Varchar2 | 20 | Not Null |
| **Employee** | Employee No.  Name | Number  Varchar2 | 5  20 | Primary Key  Not Null |
| **Receptionist** | Experience | Number | 2 | Not Null |
| **Cleaning staff** | - | - | - | - |
| **Kitchen Staff** | Responsibilities | Varchar | 25 | Not Null |
| **Cleaning** | Status  Date | Number  Date | 2  - | Primary Key  Not Null |

**12.2: Considering the descriptions given above, draw an ER diagram for the database, representing entities, attributes, and relationships.**

