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| **19115045**  **Kunal Sachdeva**  **5th Semester CSE**  **Database Management System Assignment**  **Problem statement - Detection of fake profiles.**  **Entities :**  (i) GOVERNMENT DATA :  Attributes :   * C\_ID (Citizen Identification ID) *-> primary key* * C\_Name (Citizen Name) * P\_Num (Citizen Phone Number) -> *multivalued attribute*   (ii) PROFILES :  Attributes :   * F\_UID (Fixed User ID)*-> primary key* * U\_Name ( Prifile UserName)   **Relationships :**  (i) COMP: One to one relationship between GOVERNMENT DATA and PROFILES, with total participation from PROFILES.   1. **E-R diagram :** 2. **E-R diagram to relational schema :**   **(i) GOVERNMENT DATA:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | C\_ID | NUMBER(15) | Primary Key | | C\_Name | VARCHAR(30) | NOT NULL | | P\_Num | NUMBER(10) |  |   **(ii) PROFILES:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | F\_UID | NUMBER(15) | Primary Key | | U\_Name | VARCHAR(30) | NOT NULL |   **(iii) COMP:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | C\_ID | NUMBER(15) | Primary Key, Foreign Key | | F\_UID | NUMBER(15) | Primary Key, Foreign Key |  1. **DDL Commands :**   (i)CREATE TABLE GOVERNMENT DATA (  C\_ID NUMBER (15) PRIMARY KEY ,  C\_Name VARCHAR(30) NOT NULL);  (ii)CREATE TABLE PROFILES (  F\_UID NUMBER(15) PRIMARY KEY ,  U\_Name VARCHAR(20) NOT NULL);  (iii)CREATE TABLE COMP(  C\_ID NUMBER(15) references GOVERNMENT DATA (C\_Id),  F\_UID NUMBER(15) references PROFILES (C\_Id)  PRIMARY KEY(P\_ID, C\_ID));   1. **Queries to solve the problem :**   **(i) To see the citizen details from social profile username:**  Select C\_Name, P\_Num  From GOVERNMENT DATA A and COMP B on A.C\_ID = B.C\_ID  where U\_Name = x;  **Problem statement - Tracking and dispensing intravenous fluids.**  IV fluids may need to be given urgently to restore circulation to vital organs following loss of intravascular volume due to bleeding, plasma loss, or excessive external fluid and electrolyte loss, usually from the gastrointestinal (GI) tract, or severe internal losses. In ICU and wards, patients on IV are required to be monitored constantly for the rate of flow of IV and completion of IV dispensing. Improper attachments may lead to bleeding in some cases. It is required to Design an effective, low cost device to monitor problems related to dispensing of IV.  **Entities :**  (i) PATIENT :  Attributes :   * P\_ID (Patient ID)*-> primary key* * P\_Name (Patient Name)   (ii) CONDITION :  Attributes :   * C\_Id (Condition’s ID) *-> primary key* * C\_Name (Condition’s Name)   (iii)IV(*weak entity set*) :  Attributes :   * Min (Minimum Value) * Low\_Problem (Problem on low IV supply) * Max (Maximum Value) * High\_Problem (Problem on high IV supply)   **Relationships :**  **(i) PC:**  Many to many relationship between PATIENT and CONDITION with total participation from PATIENT entity.  **(ii) IVC:**  Many to many relationship between weak entity set IV and CONDITION with total participation from CONDITION entity.   1. **E-R diagram :**      1. **E-R diagram to relational schema :**   **(i) PATIENT:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | P\_ID | NUMBER(15) | Primary Key | | P\_Name | VARCHAR(30) | NOT NULL |   **(ii) CONDITION:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | C\_ID | NUMBER(15) | Primary Key | | C\_Name | VARCHAR(100) | NOT NULL |   **(iii) PC:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | P\_ID | NUMBER(15) | Primary Key, Foreign Key | | C\_ID | NUMBER(15) | Primary Key, Foreign Key |   **(iv) IVC:**   |  |  |  | | --- | --- | --- | | **ATTRIBUTES** | **DATA\_TYPE** | **CONSTRAINTS** | | C\_ID | NUMBER(15) | Primary Key, Foreign Key | | Min | NUMBER(15,2) |  | | Low\_Problem | VARCHAR(100) |  | | Max | NUMBER(15,2) |  | | High\_Problem | VARCHAR(100) |  |  1. **DDL Commands :**   **(i)** CREATE TABLE PATIENT(  P\_ID NUMBER(15) PRIMARY KEY ,  P\_Name VARCHAR(30) NOT NULL);  **(ii)** CREATE TABLE CONDITION(  C\_ID NUMBER(15) PRIMARY KEY ,  C\_Name VARCHAR(100) NOT NULL);  **(iii)**CREATE TABLE PC(  P\_ID NUMBER(15) references PATIENT(P\_ID),  C\_ID NUMBER(15) references CONDITION(C\_ID),  PRIMARY KEY(P\_ID, C\_ID) );  **(iv**)CREATE TABLE IVC(  C\_ID NUMBER(15) references CONDITION(C\_Id),  Min NUMBER(15,2),  Low\_Problem VARCHAR(100),  Max NUMBER(15,2),  High\_Problem VARCHAR(100),  PRIMARY KEY(C\_ID) );   1. **Queries to solve the problem :**   **(i) To show minimum and maximum IV requirement for a condition C\_Name=x**  SELECT A.C\_Name, B.Min, B.Max, from IVC B  INNER JOIN CONDITION A on A.C\_ID = B.C\_ID  where A.C\_Name = x;  **(ii) To show problems if not injected in the given range for a condition C\_Name=x**  SELECT A.C\_Name, B.Low\_Problem, B.High\_Problem, from IVC B  INNER JOIN CONDITION A on A.C\_ID = B.C\_ID  where A.C\_Name = x; |