DBMS LAB 05 TASKS

Prepared by:

Mohammad Anas Jawad

Lecturer, IUT CSE

Department of Computer Science and Engineering

Islamic University of Technology

June 7, 2021

1   SCENARIO 1

Patients come to a hospital for treatment. The hospital has several floors, on each floor there are a number of rooms. Each room has a unique room number. Doctors of different specializations (such as Surgery, ENT, Medicine) work here. Patients first completes his/her basic information such as name, age, address, contact no. Then he is assigned with a doctor based on the type of sickness. Doctors consultation is recorded in a chronological fashion (i.e. by date). A patient can be attached to a number of doctors. For instance, he may need both medicine and surgery (perhaps at two different times).

Your tasks are as follows:

- Draw the ERD for the above system description.

2   SCENARIO 2

The school board has decided that it has had enough. The board cannot keep up with the increasing number of students and instructors that it needs to keep track of by using the old file style database anymore. The board has decided to switch to the relational model of database to store all these information and hired you as their database designer. The school has three departments; science, arts and commerce. Each student is assigned under one of these departments. The departments are situated in different buildings. Under each department, there are multiple instructors. However, the school board has decided that if it ever opened a new department, there might initially be no instructor under that department. An instructor might teach in multiple departments, but he/she must be assigned to at least one department. Each student has information like his ID, name, age, department etc. Each instructor has their own ID, name, department and salary.

Your tasks are as follows:

- Draw the ERD for the above system description.

3 SCENARIO 3

Government wants to implement its Citizen Information Bank (CIB). Each citizen must have some basic information such as ID, name, date of birth and address. Additionally, many citizens should have profession information. Each profession is predefined and has a number of additional information such as name of profession, minimum educational qualification and approximate salary. Citizens may have blood group information which must be from the selected list such as A+,A-, B+, B-, AB+, AB-, O+ and O-. Address is organized in two layers such as Divisions and Districts. One division have a number of districts.

Your tasks are as follows:

- Draw the ERD for the given description.