UNIVERSITY OF TORONTO

Assignment: 6
Course: CSCC43
Deadline: Nov 1st ,11:30pm
Submission: via blackboard

1- For each of the following relations, indicate the normal form for that relation. If the relation is not in third normal form, decompose it into 3NF relations. Functional dependencies (other than those obvious ones) are shown where appropriate.
   a. Professor(ProfessorID, CourseCode)
   b. Lecture(ProfessorID, CourseCode , Day, Time, Room)
   c. Lecture (ProfessorID, CourseCode , Day, Time, Room, Capacity) [FD: Room → Capacity]
   d. Lecture(ProfessorID, CourseCode, ProfessorName, CourseName)

1- Assume that a hospital maintains a relation that contains a few attributes such as patient ID, name, type of diabetes, age, marital status, and home postal code. None of the fields except patient ID is a primary key or part of a primary key. The hospital, from time to time, requires to generate two reports: the first is a report on the number of patients who are over 40 and have diabetes type A, and the second is a report on patients who are single, over 50 and have diabetes type B. How could indexes be used so that only records that satisfy this qualification are accessed?