Due Dates :
Step 1: Tuesday Feb. 23, 2016.
Note: We have our Spring break from Sat. Mar. 5 to Sun. Mar. 13, 2016. Our test 2 will be on Thursday Mar. 17, 2016.
Step 4: Complete implementation, demonstration and final report: Monday Apr. 11 to Friday Apr. 15, 2016.

In this project you will design and implement a database application. You will work in groups (teams). Each team will have three members. Each member should participate in ALL activities of the project: Design, implementation, and demonstration. The project is carried out in several main steps:

1. Conceptual design using the E-R model, Translation of the E-R model into the relational model.

2. Refinement of the design (into at least 3NF schemes, preferably BCNF or 4NF schemas).

3. Partial Implementation: Creation of database tables, some data entry, design and implementation of 2 queries and 2 transactions. Web-based interface design.

4. Complete Implementation: Creation of database tables, data entry, design and implementation of all queries and transactions, and Web-based interface design.

Your final report should contain (1) The final ER design, (2) The final relational design, including listing of all tables (schemas), keys, and data dependencies, (3) Data (current at demo time), (4) Queries and application programs. (5) You should also indicate, for each member of the group, which parts/tasks were implemented by that member.

Each team will demonstrate their project online. All members of the team should be present at the time of demonstration.

Your system should be easy to use. I should be able to check your project by going to the home page of your system.
THE PROBLEM:
We will explore the issues in an electronic medical records system by designing a hospital database system.

These are some of the queries and transactions your system should provide:

1. Q1. Given a patient’s name, list patient’s information. Include date of admission and room number (if still in the hospital), or date of discharge. Allow user to select patient if multiple patients with the same name were found.

2. Q2. List all patients currently in the hospital. Include date of admission and room number.

3. Q3. Given a doctor’s name, list all patients visited by that doctor with relevant data (date, fee, ...). It should also be possible to specify begin/end dates, and the listing will be for the period specified.


5. T1. Admit a patient to the hospital and assign room/bed. Patient’s information (including insurance information) should be entered at this time.

6. T2. Enter information for patients including diagnosis, visits by doctors, procedures carried out, and medications.

7. T3. Check out a patient and provide the billing information.

8. T4. Enter information regarding doctors, and visits they make to patients.

9. T5. Enter information regarding rooms, room types, and their prices.