In this project you will design and implement a database application. You will work in groups of three students. 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). Complete specification of queries and transactions for your system.

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

4. Demonstration.

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 issues in an electronic medical records system. You will design and implement a database system for a physician group, the 671 Family Medicine Associates.

The physician group has several doctors (say, 4 to 6 doctors) and a number of support staff (nurses, accountants, office workers).

Some of the transactions and queries for this system are listed below. Most of the functions must be password protected.

1. Enter new patient information in the database (by office workers).
2. Make an appointment for a (given) patient to see a (given) doctor (by office workers).
3. Enter diagnosis, and prescribe medications (by doctors).
5. Display patient information (by office workers, doctors, and nurses).
6. Display prescribed medications for a given patient (by patient).