ERD Problems

Problem 1: Library Management System

Design a database for a library system. The system keeps track of each book in the library. Data recorded about each book are (ISBN, Title, Author, Publisher and if it is available for borrowing or not). One or more authors may write a book. Each author has a name and an address. Each book is published through one publisher only. Each publisher has a Name, Address and more than one Phone. Library members can borrow just one book at a certain time. Borrowing date and return date must be recorded for every borrowed book. Each member has an ID, Name, Address and membership type (Premium / Regular)

Problem 2: University Management System

1. Assiut University is divided into several faculties: Faculty of Arts, Faculty of Engineering...etc. Each faculty is administrated by a dean.

2. Each Faculty is composed of several departments.

3. Each department offers several courses.

4. Each department employs several professors, but each professor is assigned to a single department.

5. Each department is chaired by a department chair, who is a professor.

6. Each professor may teach several courses. A professor may also be on research contract and teach no courses at all.

7. Each course is taught by several professors.

8. Each student can enroll in several courses.

9. Each student has an advisor in his department. Each advisor advises severalstudents. An advisor is also a professor, but not all professors advise students.

Problem 3: International Magazine

An international magazine wants to keep track of its published articles. The manager needs answers to questions such as the following:

How many articles do we have for each department (e.g. sports, politics…etc.)?

Which journalist wrote that article?

At which department does that journalist work?

When has been that article written?

How many registered visitors read that articles?

What are the comments, written by visitors, for that article?

What are the images attached with that article?

Who is the journalist that head that department?