ANKARA UNIVERSITY
COMPUTER ENGINEERING DEPARTMENT

COM2058 LAB7

1.

You are given the task of designing a DBMS-based email system. The system will be used to store and access email messages and contact lists for a large collection of users. Your client has specified the following requirements:

- Each user will have a unique numeric ID. In addition, you need to store the first name, last name, and email address of each user in the system.
- Each user has a number of contacts. A contact has a first name, a last name, an email address, and one or more phone numbers (where each phone number has a type, e.g., home, cell, etc.).
- An email message belongs to exactly one user and has a “to” field, a date, a subject field, and a body field.
- Each email message is stored in exactly one folder.
- A folder corresponds to a single user and has a name and a parent folder.
- Every user is either a paying customer or a trial user.
- Trial users have expiration dates and remaining quota associated with them.
- Paying customers have no quota but do have a balance associated with them.

Draw an ER diagram for this database using as much of the ER model as appropriate.

2.

A database is to be designed for a college to monitor students’ progress throughout their course of study. The students are studying for a degree (such as BA, M.Sc., etc.) within the framework of the modular system. The college provides a number of modules, each being characterized by its code, title, and credit value, module leader, teaching staff and the department they come from. A module is coordinated by a module leader who shares teaching duties with one or more lecturers. A lecturer may teach (and be a module leader for) more than one module. Students are free to choose any module they wish but the following rules must be observed: some modules require prerequisites modules and some degree programs have compulsory modules. The database is also to contain some information about students including their numbers, names, addresses, degrees they study for, and their past performance (i.e. modules taken and examination results).

Draw an ER diagram for this database using as much of the ER model as appropriate.