

**CSc 484 – Assignment #3 – Gamradt**  
**Due: 04-09-24 @ 9:30 AM**

Name(s): \_\_\_\_\_  
**You may work in groups of up to 3 students**

1. DBMS requirements used by an organization to manage their parking lots:

A large organization manages several parking lots, which are used by staff. Each parking lot has a unique name, location, capacity, and number of levels. Each parking lot has parking spaces, which are uniquely identified using a space number. Members of staff can request the sole use of a single parking space. Each member of staff has a unique number, name, telephone extension number, and vehicle license number.

- a. Create an ER model for the above description
  - Include Cardinality and Participation – see lecture 14 slide 30 as an example
- b. Convert the ER diagram created in (a.) into relational schema

2. DBMS requirements used by a library to manage their books:

The library provides books to borrowers. Each book is described by title, edition, and year of publication and is uniquely identified using the ISBN. Each borrower is described by his or her name and address and is uniquely identified using a borrower number. The library provides one or more copies of each book, and each copy is uniquely identified using a copy number, status indicating if the book is available for loan, and the allowable loan period for a given copy. A borrower may loan one or more books, and the date each book is loaned out and is returned is recorded. Loan number uniquely identifies each book loan.

- a. Create an ER model for the above description
  - Include Cardinality and Participation – see lecture 14 slide 30 as an example
- b. Convert the ER diagram created in (a.) into relational schema

**Note:** drawing tools

- <https://www.diagrams.net/>
- <https://www.lucidchart.com/pages/>
- ...