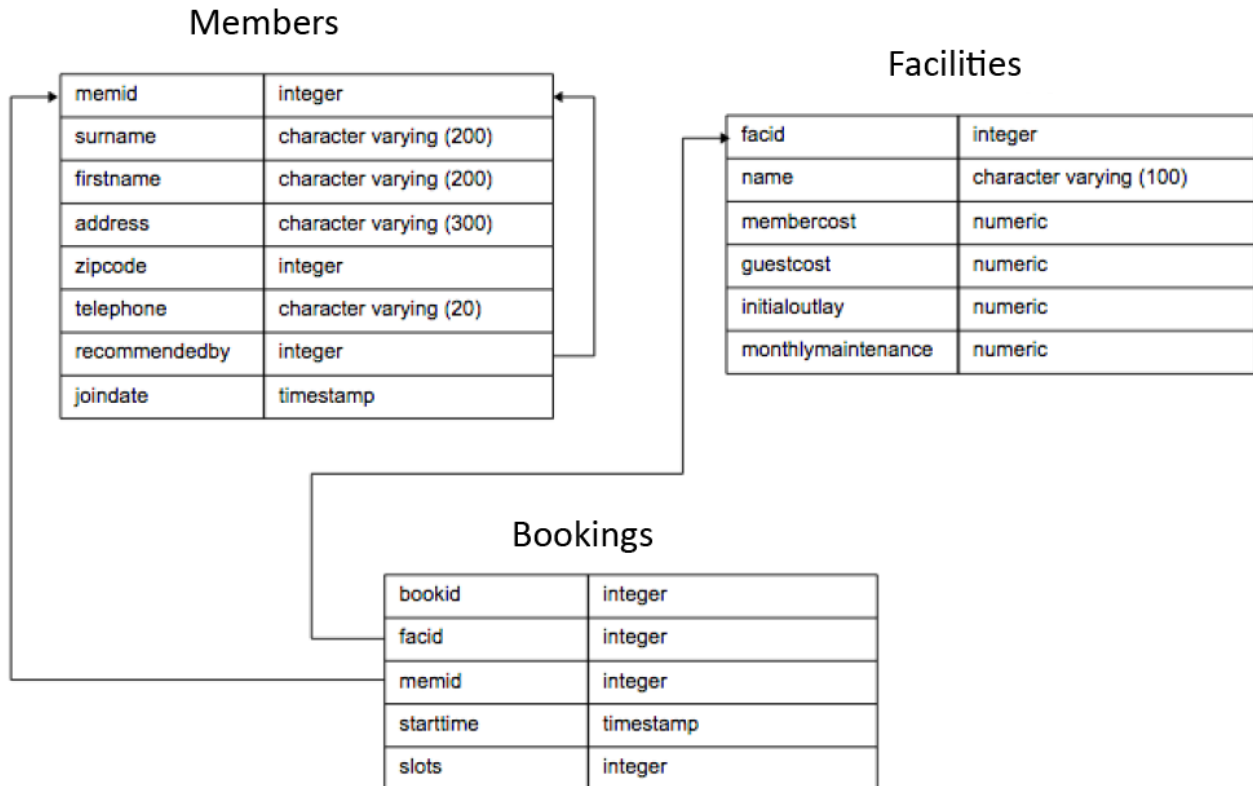


CS 315 Modern Database Management
Midterm Exam
SUMMER I
Northeastern Illinois University-



- 1-Write a relational algebra query that produces a list of *facid* and *name* of *facilities* that charge a monthly fee of \$100 for their members. **(5 points)**
- 2-Write a relational algebra query that produces a list of *name*, *membercost*, *guestcost* of *facilities* that have a membership cost that is less than half of the *guestcost*. **(5 points)**
- 3-Write a SQL query that produces a list of *facid* and *name* of *facilities* that charge a *membercost* of \$100 for their members. **(4 points)**
- 4-Write a SQL query that produces a list of *name*, *membercost*, *guestcost* of *facilities* that have a membership cost that is less than half of the *guestcost*. **(4 points)**
- 5-Write a SQL query that produces an ordered list of the *surnames* in the *members* table. The list should **NOT** contain duplicates. **(4 points)**
- 6-Write a SQL query that produces a list of *firstname*, *surname* and *telephone* of members that have a *firstname* starts with letter 'z' and end with letter 'k'. **4 points)**
- 7-Write a SQL query that produces a list of members that do not live in *zipcodes* 60621, 60625, 60623, 60654. Do **NOT** use OR operator. **(4 points)**

- 8-Write SQL a query that finds how many members have a telephone number that starts with 312. **(5 points)**
- 9-Write a SQL query that produces a list of facilities (all columns) that have a *membercost* less than the average of all facilities. **(5 points)**
- 10-Write a SQL query that finds the facility that has the minimum number of members. **(5 points)**
- 11-Write a SQL query that produces a list of monthly maintenance costs for each facility that has monthly maintenance cost between \$50 and \$100. **(5 points)**
- 12-Write a SQL query that returns the membership costs of Gerald Butters. **(10 points)**
- 13-Write a SQL query that produces a list of *firstname*, *surname* and *telephone* numbers of members that live in one of the *zipcodes* 60612, 60624 and booked a table tennis room. **(10 points)**
- 14-Write a SQL query that produces a list of *facid*, name of facilities and the total number of slots booked for each tennis court facility. **(10 points)**
- 15- Write a SQL query that changes *guestcosts* of all tennis court facilities to \$10. **(6 points)**
- 16- Write a SQL query that deletes all members that are recommended by some other member. **(7 points)**
- 17- Write a SQL query that creates a record of a new facility with the following values: *facid* = 0, *name* = 'Softball field', *membercost*=40, *guestcost*=55, *initiallayout*=15000, *monthlymaintenance*=300.**(7 points)**