CSE 370– Database Systems

Assignment 1

Summer 2023

Submission Instructions:

1. Write your name, id, section on top of the first page
2. Your answer should be handwritten, take pictures and create a single pdf.
3. **Submit the pdf in the following form**: https://forms.gle/McUwsSyLjVeuEgUd8
4. **Submission Deadline**: 11th July, 2023 11:59 pm (midnight)
5. **NO LATE SUBMISSION WILL BE ACCEPTED**

Question 1 [10 Marks]

a) Represent the following information using ER Diagram symbols and identify the different type of attributes used: [7 marks]

STUDENT

ID	NAME	CGPA	EMAIL
S230	Arif	3.55	a@bracu.com, a@g.com
S231	Sifat	4.0	s@bracu.com, s@y.com
S232	Tasneem	3.99	t@bracu.com
S233	Sifat	3.55	s2@bracu.com, s2@g.com, s2@y.com

b) Identify the entity, entity type and entity set from the above table. [3 marks]

Question 2[CO2] [10 Marks]

Given the scenario below, construct an EER diagram for the library management system at ABC University:

a. Members have a unique ID, name, joining date, phone number and an email address.
b. Members have to be either a faculty member or student or they can be both. Students have a CGPA attribute, faculty members have a courses taught attribute. Faculty members may have taught several courses and a course is composed of course code and title.

c. Books have a unique ISBN, title, multiple authors, publisher, publication date, edition. A book can be a sequel to another book.

d. Each book has several Book Copies. The copy number, date purchased and shelf number is stored. Note that for each book the copy numbers are 1, 2 and so on. Shelf number and date purchased can be the same for different books.

e. Members can borrow book copies. The borrowed date, return date, due date and late fees are recorded. The late fees can be calculated using the return date and due date, so it should not be stored, but shown using an appropriate symbol.