

## ISYS 464, Fall 2023, Assignment 1, Due Date: Wednesday, 9/13/23

### ERD assignment:

1. The corporate owner (franchisor) of a national chain is seeking to automate the management of its franchised restaurants, franchisees, and contract data. The company wants an information system whereby it could obtain, for any given restaurant, type of contract in effect, phone number and location of each restaurant (including street address, city, state and zip code), and detailed information about the restaurant owner (including owner's social security number, full name, address, email and phone number). The various contract arrangements are:

Contract 1: 99-year term, Contract 2: 5-year term, Contract 3: 10-year term

Other contract types may be offered in the future. The company currently has 500 franchised restaurants. Expansion plans call for opening an additional 200 restaurants each year for the next three years, all of which are to be franchised. There is no limit on the number of restaurants an individual may own, and owners are encouraged to apply for multiple restaurants. Draw the Entity-Relationship diagram **with attributes** for this information system. In case that the relationship is not clear from the description you have to state your assumption about the relationship. Draw an Entity-Relationship Diagram that visually represents the entity types and their relationships. Identify the primary key and attributes for each entity.

2. An online bookstore wants to design a database to manage its operations. The company needs to keep track of customers, books, orders, authors, and genres. Each customer can place multiple orders, and each order can contain multiple books. Each book is associated with one or many authors and belongs to a specific genre. The database keeps each customer's ID, name, email, phone and address; each book's BookID, Title, ISBN, Publication Year and price; each order's OrderID, OrderDate, and credit card information which includes type of credit card, card number, expiration date and security code; each author's AuthorID, name, nationality and birth year; each genre's id and name. Draw an Entity-Relationship Diagram that visually represents the entity types and their relationships. Identify the primary key and attributes for each entity.

### Requirements:

**1. You must use ChatGPT for this assignment following these steps(see my example):**

**Step 1: Submit the database description with your analysis to ChatGPT to get its comment.**

**Step 2: Ask questions you may have about ChatGPT's comments, or other questions about the relationship between entities.**

**Step 3: Accept or continue to ask questions.**

**2. You must use a drawing tool such as Draw IO to draw the ERD.**

**3. Copy/paste the dialogue of step 1 and 2 with the ChatGPT to a Word document, and copy/paste the screenshot of the ERD to the same Word document.**

**4. You don't have to worry about the mandatory/partial participation in this assignment, we will do that in assignment 2.**

**5. Submit the Word document to my email:dchao@sfsu.edu**

**Please note that ChatGPT may make mistakes and you are responsible for the correctness of your assignment.**