CSE 581

**Lab 2: Design Lab**

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**Purpose:**

Create a sample ER diagram for database design.

**Deliverables:**

A Microsoft Visioor Word drawing of the design: draw tables with table title, primary key(s), foreign key(s) and relationships (using connections) specified properly; you are also supposed to bold or indicate the required columns/fields for each table. If you need to, a brief explanation of your design.[[1]](#footnote-1)

**Steps:**

1. Follow the steps described in class. Create a DB design for the business problem described below[[2]](#footnote-2). Explain your design choices. 1

*Create a sample DB design for a small bakery. The bakery is interested in keeping track of its customers, suppliers, products, ingredients and sales. Bakery sells their products to the customers. Bakery uses the ingredients to create their products. Suppliers provide the ingredients to the bakery.*

**Entity Relationship DIAGRAM:**

A diagram of a company

Description automatically generated with medium confidence

Figure 1: Bakery Database ER Diagram

**Description:**

**Customers:** Stores information about bakery customers, including their names, contact details, and customer categories. **Sales:** Records details of bakery sales transactions, such as the customer involved, sale date, total amount, and payment method. **Products:** Contains information about bakery products, including their names, descriptions, categories, and prices. **Suppliers:** Stores data about suppliers who provide ingredients to the bakery, including their names and contact information.

**Ingredients:** Contains details about bakery ingredients, such as names, expiration date, and date ingredient created information. **PurchaseMapping:** Establishes a link between products and sales, indicating which products were sold in each transaction. **IngredientSupply:** Connects ingredients to their respective suppliers, helping track the origin of bakery ingredients. **ProductIngredients:** Links products to the ingredients used to make them, facilitating efficient recipe management and ingredient tracking. These tables collectively support the bakery's operations, allowing for efficient customer management, sales tracking, and streamlined ingredient and product management.

1. This is optional - at most, a paragraph or two - very short, only listing the **NON-obvious** choices. [↑](#footnote-ref-1)
2. Think about what data makes sense for the business problem and select the fields that make the most sense. Expected design scope is somewhere around 7-10 tables, 2-6 or so fields/table on average – your design does not need 100 of fields, but it does need to be able to function on its own. [↑](#footnote-ref-2)