# Mini-Project: "Building a Database for a Small Business"

## Scenario:

Imagine you are responsible to create a database for a small business (e.g., a bookstore, grocery store, or travel agency). Your task is to create a database system to manage their operations efficiently. The database will include information about customers, products, sales, and employees.

## Objectives:

1. Learn how to create a database and define its structure.
2. Understand and apply primary keys, relationships, and normalization principles.
3. Practice creating tables, forms, queries, and reports.
4. Develop skills to analyze data and generate meaningful insights.
5. Integrate personal information into the database for submission validation.

## Project Requirements:

### 1. Database Design

- Design the database structure by identifying tables and their relationships.
- Use **4-6 tables**, such as:
  - **Customers**: To store customer information.
  - **Products/Services**: To store details of products or services sold.
  - **Orders/Sales**: To store purchase information.
  - **Employees**: To track employees managing sales or services and here you must add your name and personal data in order to differentiate the studets and work done.
  - **Suppliers** (optional): To store supplier information for inventory.

### 2. Tables

- Create the tables in Microsoft Access with the following:
  - Define primary keys for each table.
  - Set up appropriate field types (e.g., Text, Number, Date/Time).
  - Establish relationships between tables using foreign keys (e.g., link `CustomerID` in the **Orders** table to the **Customers** table).
  - Enforce referential integrity.

### 3. Forms

- Create user-friendly forms for data entry.

- Include at least:
  - A form for adding new customers.
  - A form for recording sales or orders.
  - A form for adding products or services.

## 4. Queries

- Create at least **3 queries** to answer business-related questions:
  - Total sales in a given period.
  - Best-selling products or services.
  - Customers with the highest number of orders.

## 5. Reports

- Generate at least **2 states (reports)** to summarize data:
  - A sales summary report (e.g., total sales by month).
  - A customer order history report.

## 6. Owner Personal Information Table (each student must enter their info)

- Create a table named `OwnerInfo` with the following fields:
  - `OwnerID` (Primary Key, AutoNumber).
  - `FirstName` (Text, required).
  - `LastName` (Text, required).
  - `OwnerNumber` (Text or Number, unique ID assigned by the institution).
  - `Email` (Text, required).
  - `DateOfSubmission` (Date/Time, default to current date).
- Use a form called `Owner Details` for data entry.
- Ensure validation rules are applied:
  - Email must include "@".
  - No blank fields allowed.

## 7. Integration

- Link `OwnerInfo` to another table in the database. For example:
  - Use `OwnerID` in the **Employees** table to show the owner of the employees.

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## Submission Guidelines:

1. Submit the **Access file (.accdb)** via the email below with your name and group with it

   My email: economyoeb@gmail.com

## Deadline

7 December 2024 at 11:59pm

## Tips for Students:

- Plan your database structure before implementation.
- Test your queries and forms to ensure they work as intended.
- Refer to Access tutorials if you face challenges.
- Keep the design simple and user-friendly.
- Every student must enter his/her personal information as mentioned in part 6 (table owner) otherwise the project will be considered copied and will result in **"0/20"**