

Invoice Management Database - SQL Final Project

Project Overview

This project is a relational database designed to support an invoice management system. The database is built based on an example invoice form, provided spreadsheets, and user interactions. The goal was to create a well-structured database in **3rd Normal Form (3NF)** with appropriate keys, relationships, and queries to manage invoice-related data efficiently.

Key Features

- **Database Schema in 3rd Normal Form (3NF)** to eliminate redundancy and ensure data integrity.
- **Entity-Relationship (ER) Diagram** to visualize database relationships.
- **SQL Script** to create and populate the database with sample data.
- **Queries for Testing & Reporting**, including:
 - Retrieving customer invoice details.
 - Summarizing total revenue.
 - Identifying pending invoices.
 - Other relevant data operations.

Database Design

The database consists of multiple related tables with **primary keys (PK)** and **foreign keys (FK)** to maintain referential integrity.

How to Run the Project

1. **Setup the Database:**
 - Open a SQL database management system (e.g., MySQL, PostgreSQL, or SQL Server).
 - Execute the provided SQL script ([SQL_code.sql](#)) to create tables and insert sample data.
2. **Test Queries:**
 - Run the included queries to validate data integrity and generate reports.
3. **ER Diagram:**
 - Refer to the [ER_Diagram.png](#) file for a visual representation of the database schema.

Technologies Used

- **SQL** (MySQL/PostgreSQL/SQL Server)
- **Entity-Relationship Modeling**

- **Excel for Data Preparation & Testing**

Author

This project was developed as part of a **Database SQL Final Project** for a university course.