FINAL PROJECT

Database Application

Department of Computer Systems Technology
VCC Community College – Downtown Campus
CSTP 1201 –Intro to Database Mgmt Systems

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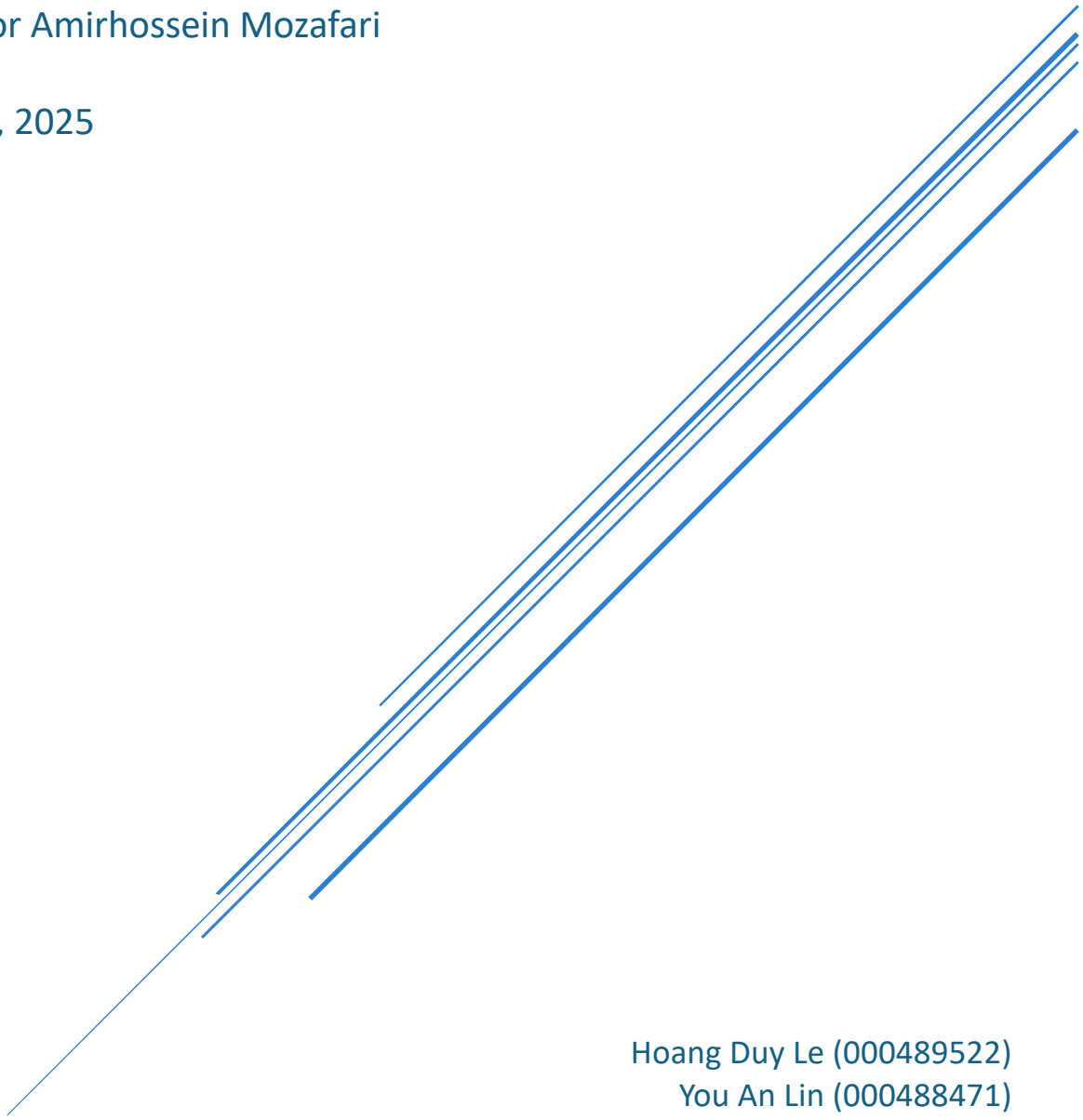

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Project Overview

The database application is designed to manage operations for a Korean food restaurant. Built with a MySQL database and Tkinter interface, it provides tools for order processing, inventory management, and customer tracking.

Core Features

1. **Data Management**
   - **Normalized Database**: 10 interconnected tables designed to 3NF standards
   - **Complete CRUD Operations**: Create, read, update, and delete functionalities for all entities
   - **Referential Integrity**: Foreign key constraints maintain data consistency

2. **User Interface**
   - **Dual-Purpose Navigation**: Search tab for queries and Modify tab for data manipulation
   - **Tab-Based Organization**: Logical grouping of related functions
   - **Form-Based Entry**: Consistent data entry forms with appropriate validation

3. **Key Business Functions**
   - **Order Processing**: Track orders from creation to completion
   - **Inventory Control**: Monitor stock levels and manage supplier orders
   - **Employee Management**: Track staff information with hierarchical relationships
   - **Customer Relations**: Store customer information for personalized service
   - **Financial Tracking**: Record payments with multiple payment methods

4. **Technical Implementation**
   - **MySQL Database**: Robust relational data storage with appropriate constraints
   - **Python & Tkinter**: Desktop application with intuitive navigation
   - **Modular Design**: Separation between UI, business logic, and data access

5. **Business Value**
   - **Operational Efficiency**: Streamlined workflows reduce administrative time
   - **Data Accuracy**: Validation ensures data consistency and reliability
   - **Improved Service**: Fast access to customer and order information
   - **Inventory Control**: Real-time stock monitoring prevents shortages
   - **Decision Support**: Foundation for data-driven business management

6. **Documentation**
   - **Entity-Relationship Diagram**: Included the EER diagram shows tables and their relationships
   - **GitHub Repository**: Contains all the source code, SQL files, and additional documentation

This project demonstrates our understanding of database design principles, application development, and real-world business processes in a cohesive solution for restaurant management. Through careful implementation of normalization techniques and intuitive interface design, we have created a system that fulfills academic requirements and addresses practical operational needs that would benefit an actual restaurant business.

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Final Project EER Diagram