(JAVA-I + SE) Food Ordering System

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Project Outline:-

- Introduction
- Scope
- Code Analysis: Key Implementation Details
- Functional Requirements
- Diagrams
- Limitations and Future Enhancements

Introduction

Overview

Our food ordering system allows users to easily browse restaurant menus and place orders. The system is designed to simplify the dining experience, making it more convenient and efficient for both customers and restaurants.

Purpose

The primary purpose is to allow users to browse restaurant menus, place orders, and receive bills. Features include multiple restaurants, dish selection, bill calculation, and quiz-based discounts.

Key Features

The system boasts multiple restaurant options, easy dish selection, automated bill calculation, and a unique quiz-based discount system. These features combine to offer a user-friendly and rewarding experience.

Project Scope: Defining User Interactions

1 **User Accounts**

Users can create an account and log in, providing a personalized experience.

2 **Restaurant Menus**

Restaurants have fixed menus with predefined dishes, ensuring consistency and ease of ordering. This also simplifies the system's data management.

3 **Browsing and Ordering**

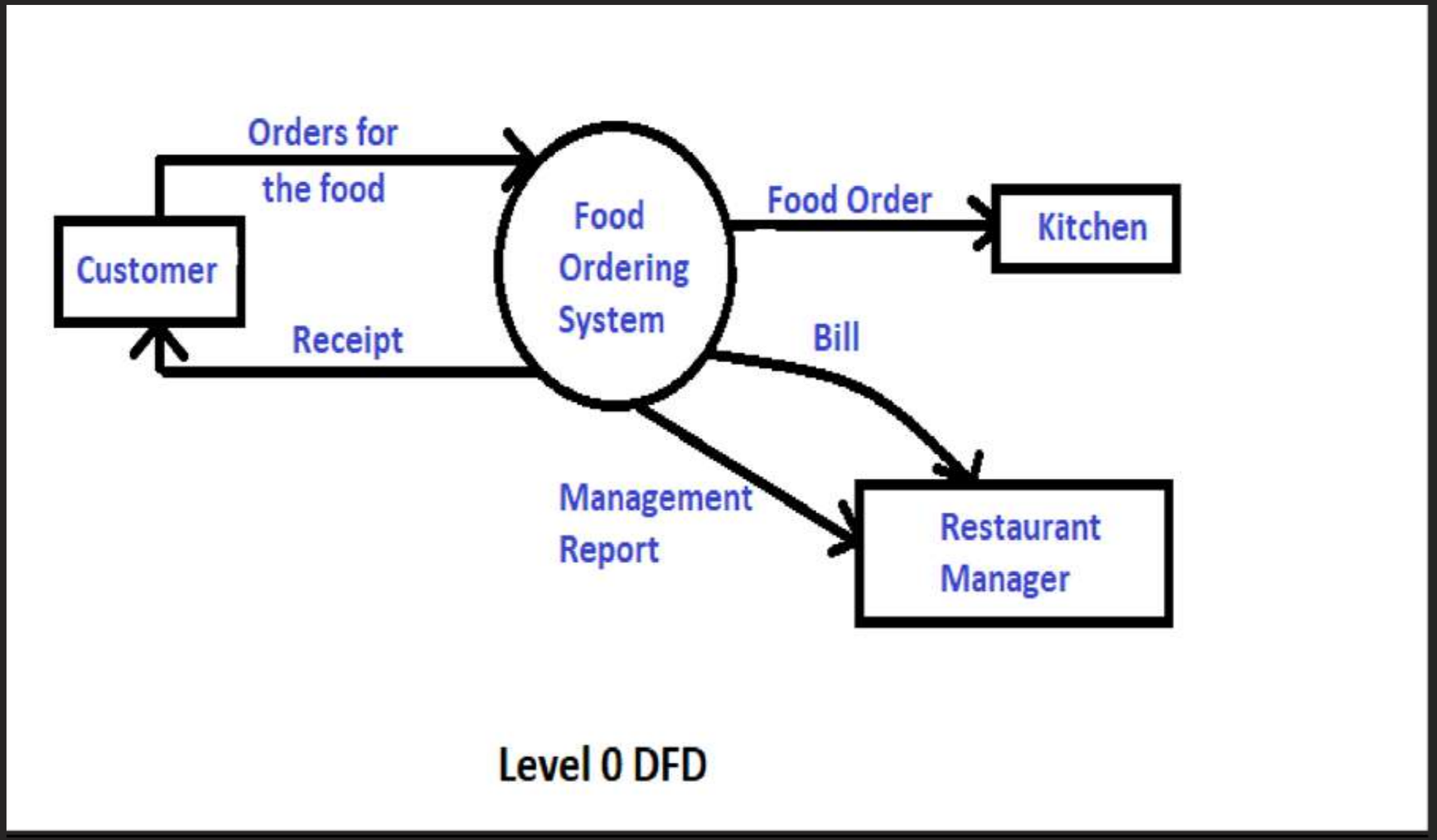
Users can browse, search, and order dishes, making the selection process intuitive. Search functionality enhances the user experience.

4 **Bill Calculation**

The system calculates the total bill, including GST and discounts, providing transparency. This eliminates manual calculations.

DIAGRAM

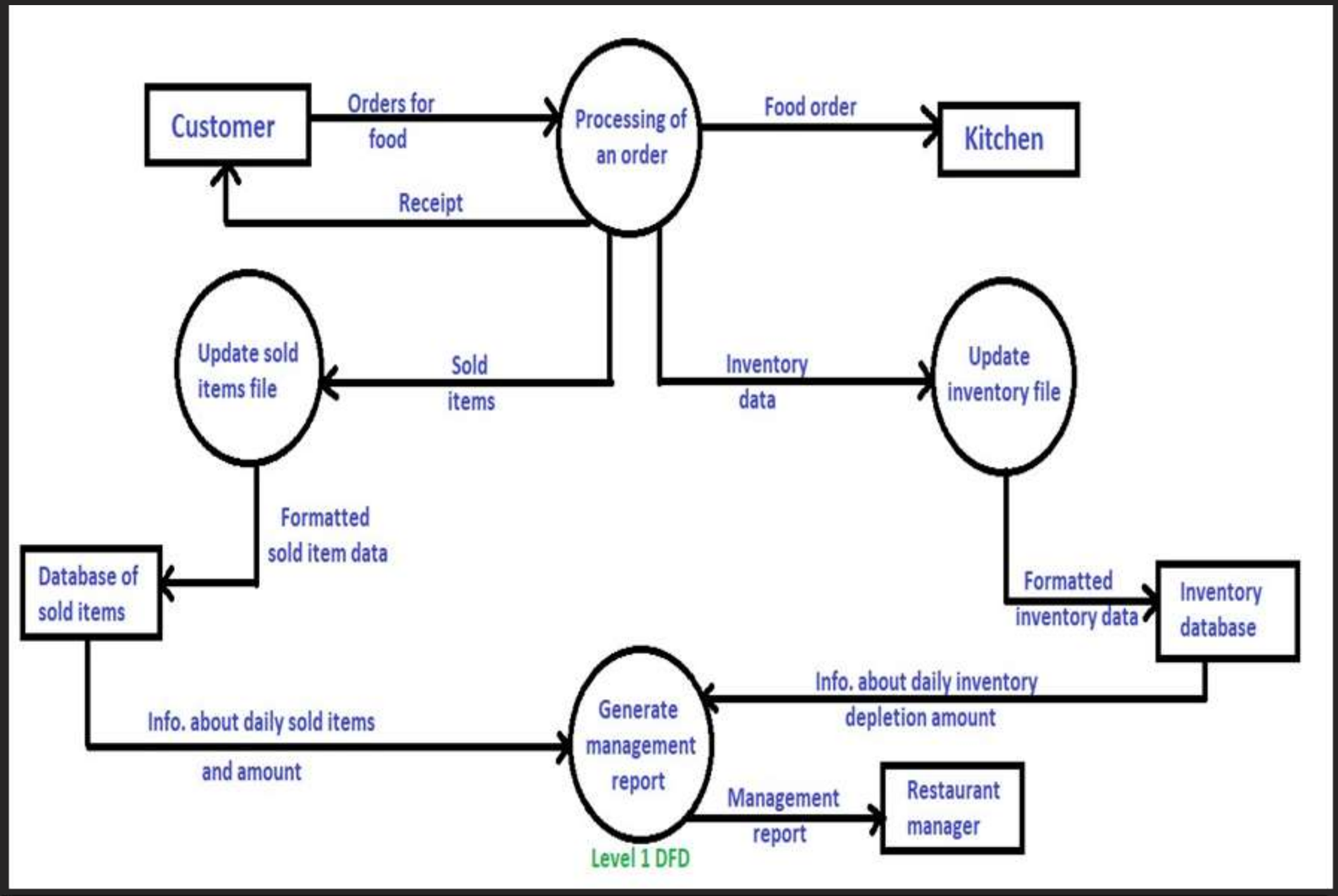
DATA FLOW DIAGRAM LEVEL 0



Level 0 DFD

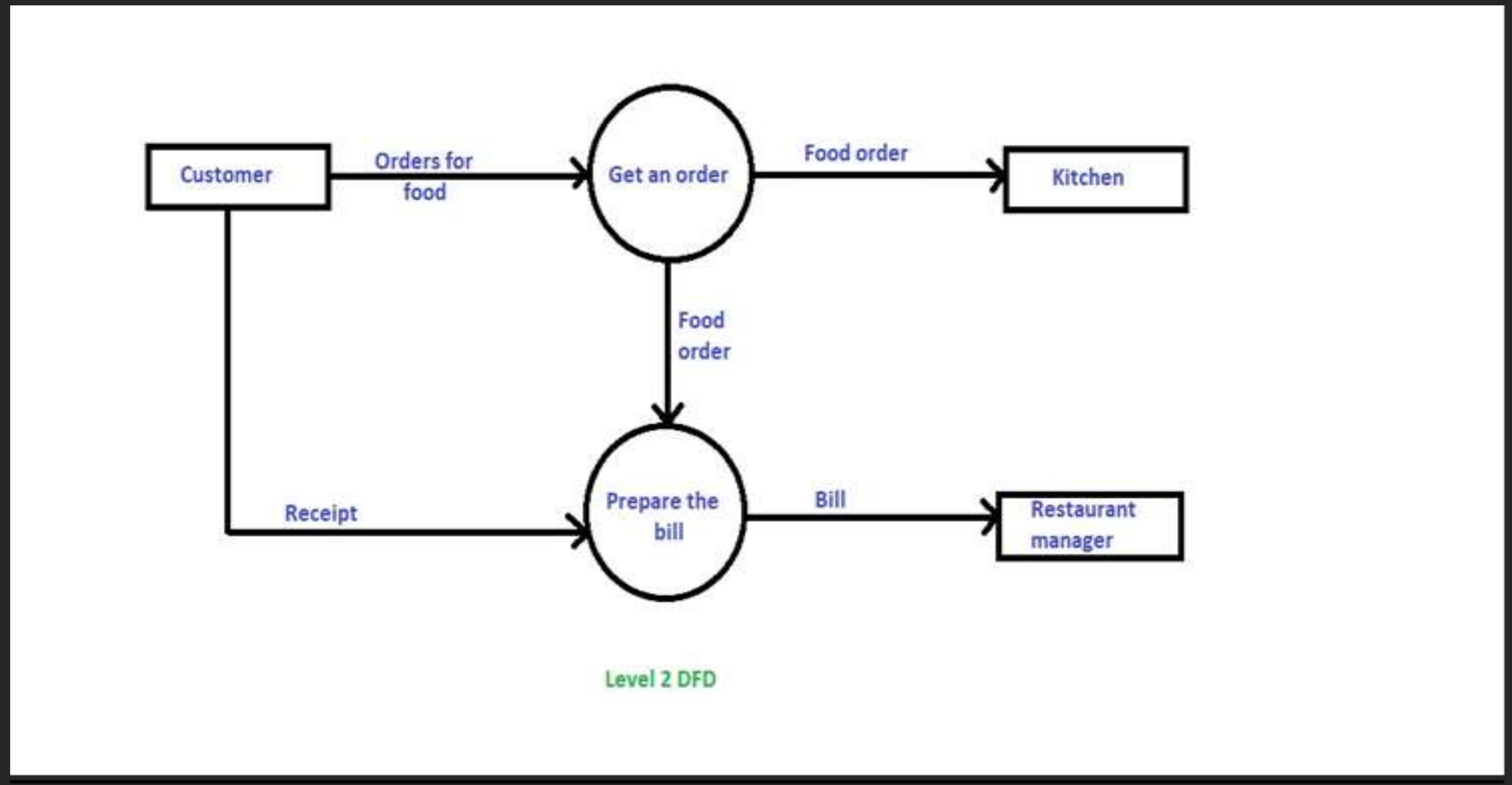
DIAGRAM

DATA FLOW DIAGRAM LEVEL 1



DIAGRAM

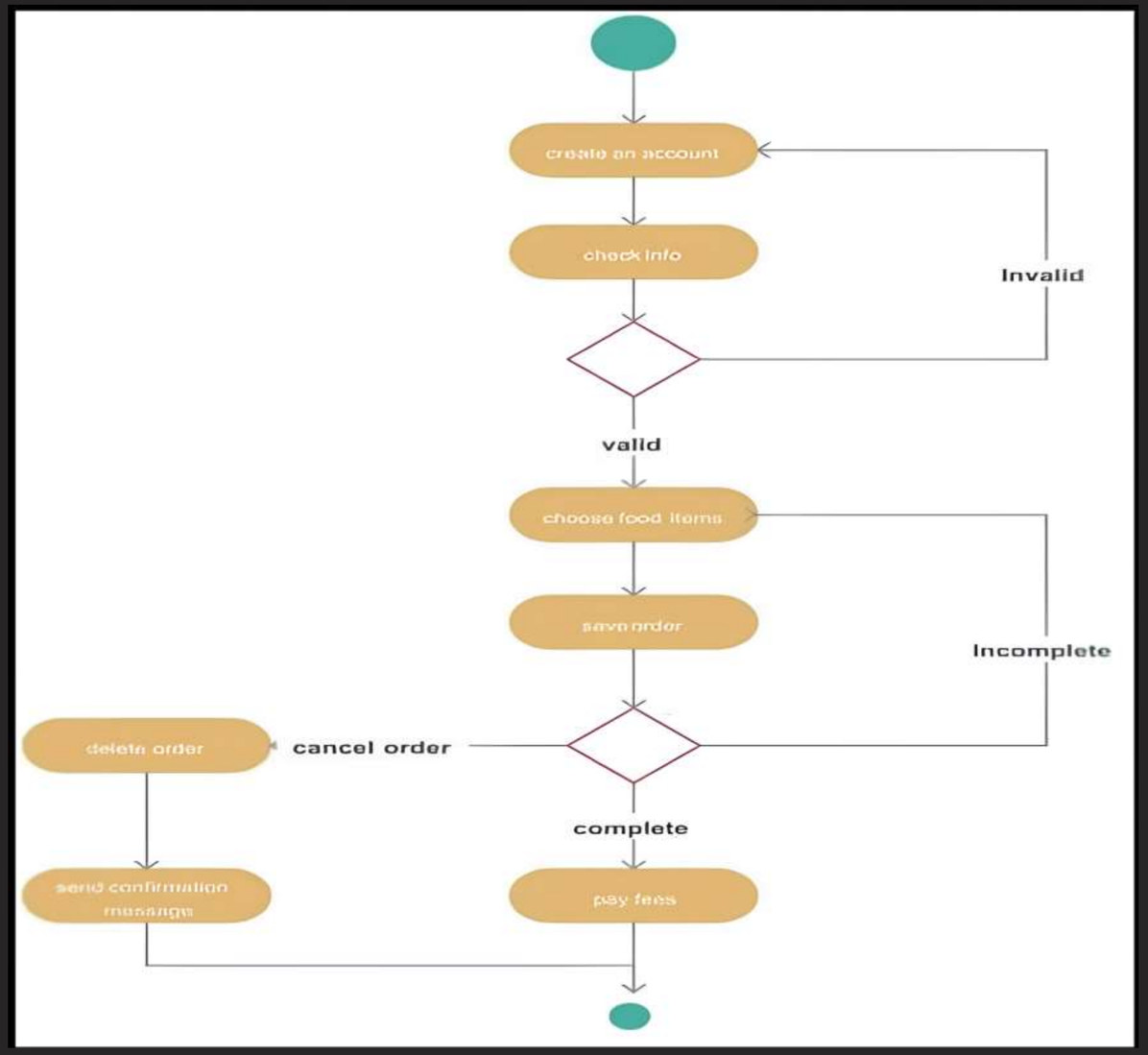
DATA FLOW DIAGRAM LEVEL 2



Level 2 DFD

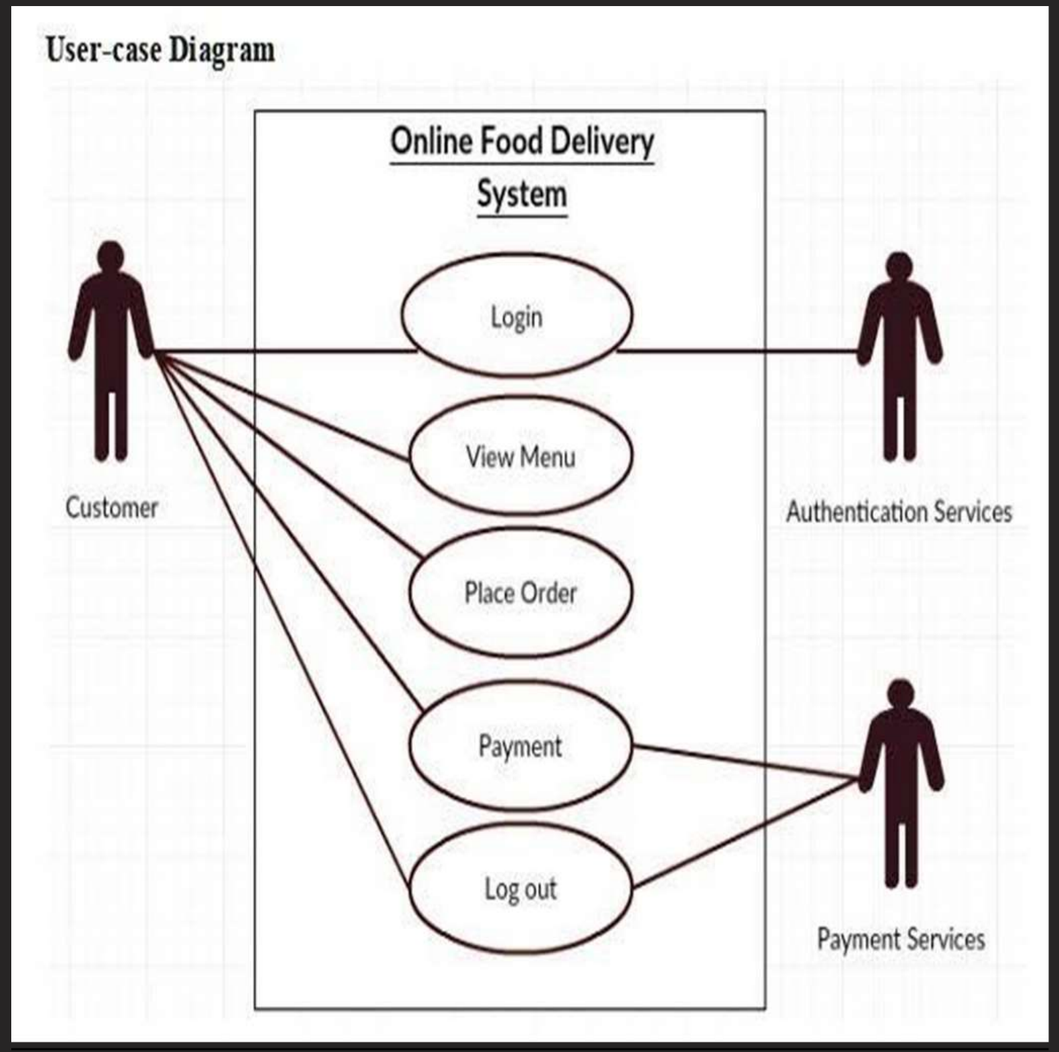
DIAGRAM

ACTIVITY DIAGRAM



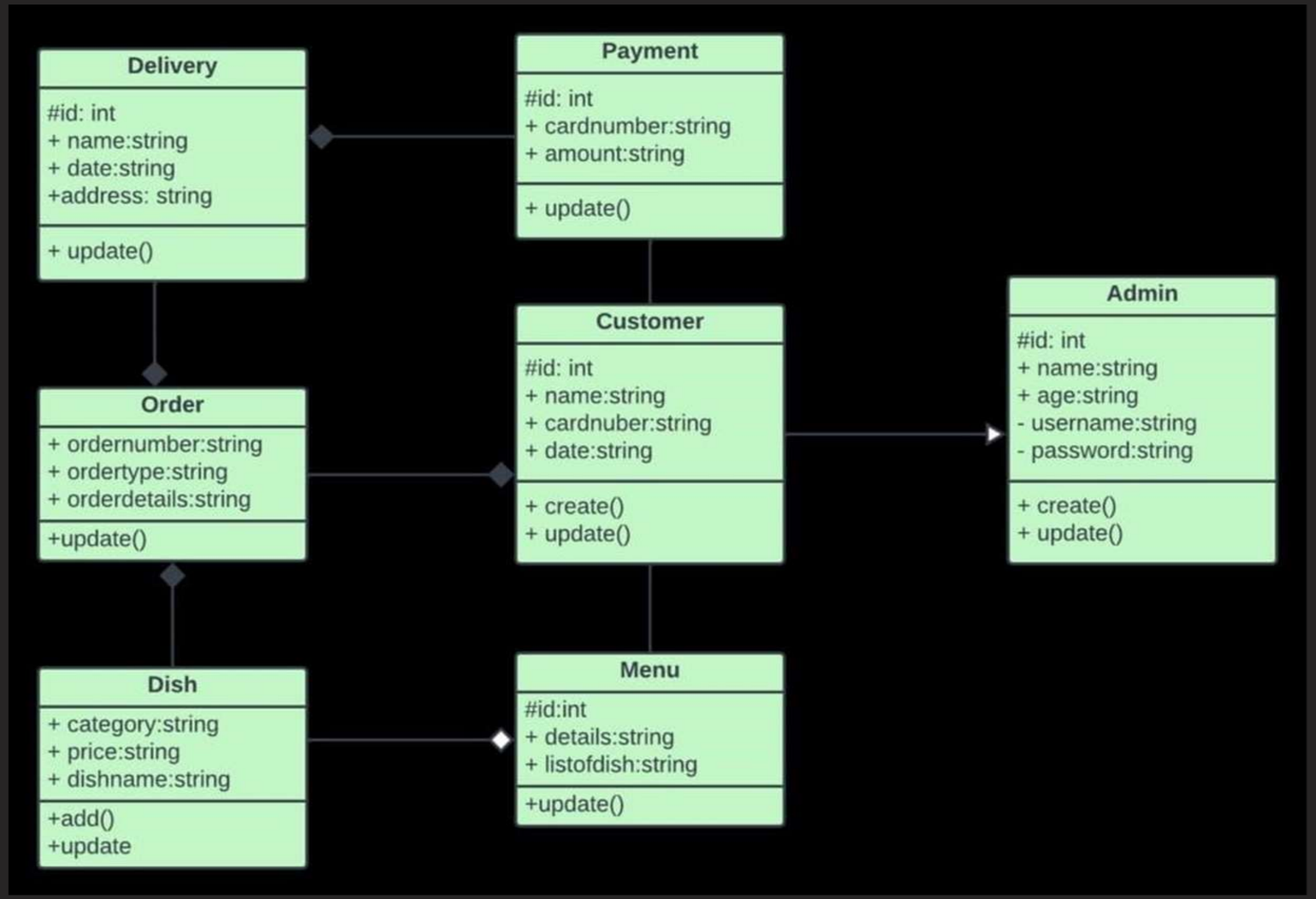
DIAGRAM

USE CASE DIAGRAM



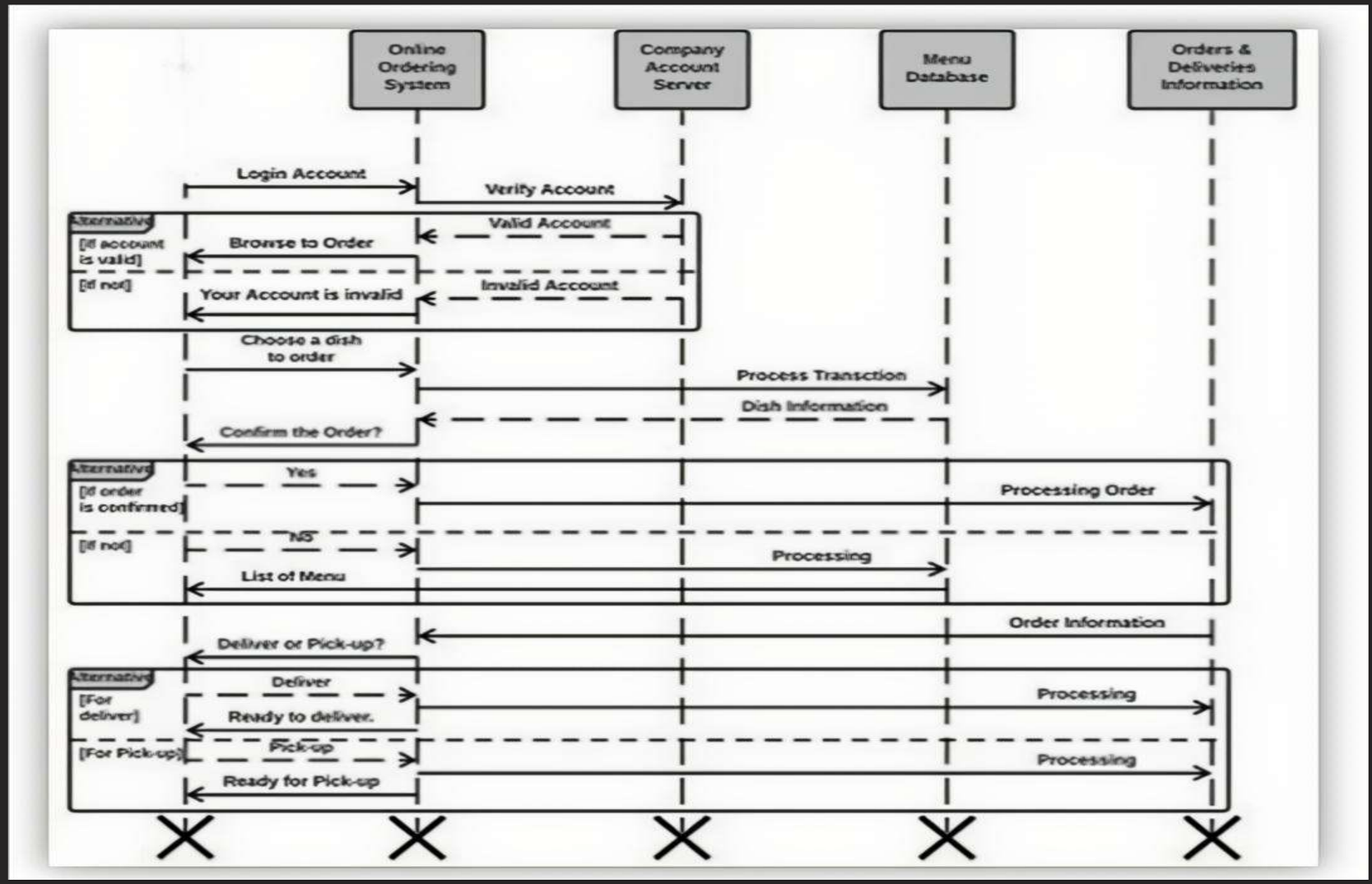
DIAGRAM

CLASS DIAGRAM



DIAGRAM

SEQUANCE DIAGRAM



Code Analysis: Key Implementation Details

Object-Oriented Approach

The system uses an object-oriented approach with array-based data storage for efficient management of menu items and user information.

User Input

The Scanner class is used for user input, enabling interactive order placement and menu browsing. This supports dynamic interaction.

Restaurant and Menu Handling

Loop-based restaurant and menu handling allows dynamic navigation through the menu. Conditional logic is utilized for user interactions.

Discount Calculation

Conditional logic is implemented for discounts and bill calculation, ensuring accurate and automated pricing. Switch-case logic improves user interactions.

Functional Requirements: Core System Features

User Registration & Login

New users can easily create an account, while existing users can log in securely. This ensures a personalized and secure user experience.

Menu Browsing & Selection

Users can view dishes from multiple restaurants and search for specific items. Filters by category and dietary restrictions are included.

Ordering System

Dishes can be added to the cart, and users can view the total bill with GST. Order summaries include itemized costs.

Quiz-based Discount

Users can answer quiz questions for discounts of up to 20%, adding a fun element to the ordering process. Discounts are applied automatically.

Limitations and Future Enhancements

1

Current Limitations

The current system lacks real-time order tracking and online payment integration. It's also limited to predefined restaurants and dishes, requiring manual updates for menu changes.

2

Future Enhancements

Future enhancements include an interactive GUI and implementation of a database for storing orders and user data. This will improve user experience.

3

Integration

Integrating online payment and order tracking will significantly improve convenience. Additionaly, introducing restaurant self-service menu updating will allow for automated updates.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YOU