# NETIV CAFE INVENTORY

# AND

# POS MANAGEMENT SYSTEM

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# 1. Introduction

## 1.1 Purpose

This document describes the requirements and features of the **Netiv Café Inventory and POS Management System.** The purpose of creating this system is to help Netiv Café manage its daily operations in a faster, more organized, and more efficient way. Currently, many cafés face challenges such as manually recording sales, forgetting to reorder stock, making mistakes in orders, or having no proper reports to track performance. These problems can lead to loss of income, customer dissatisfaction, and difficulty in managing the business. The system we are developing aims to solve those problems by providing a reliable digital platform that handles both inventory management and point-of sale (POS) operations.

## 1.2 Intended Audience

The primary users of this document are:

• **Owners/Managers**: review KPIs, sales, and stock health.

• **Cashiers**: process orders, payments, and receipts.

• **Inventory Clerk:** encode products, receive deliveries, track wastage.

• **Developers**: implement, test, and maintain features.

• **Admin:** handle deployment, backups, user access, and security

## 1.3 Product Scope

The **Netiv Cafe Inventory and POS Management System** provide a reliable and efficient platform for managing daily operations. Key features include:

- Automated sales transaction processing through POS.
- Real-time inventory updates when products are sold.
- Stock monitoring with alerts for low inventory
- Daily, weekly, and monthly sales reports.
- User-friendly interface for both staff and administrators.

## 1.4 Definitions, Acronyms, and Abbreviations

**POS (Point of Sale)** – A digital system used to process customer transactions at the checkout counter.

**Inventory** – The stock of ingredients, raw materials, and finished products held by the café. **SKU (Stock Keeping Unit)** – A unique code assigned to each item for inventory tracking and

identification.

**Admin User** – A system user with full access to all modules, settings, and reports.

**Cashier** – A staff member responsible for processing sales through the POS system.

**Real- time Data** – Information that is updated instantly as events occur, ensuring accuracy.

## 2. Overall Description

### 2.1 User Characteristics

**Admin** – Require summarized reports and easy-to-read dashboards.

**Cashiers/Staff** – Have basic computer skills; need a simple and fast POS interface.

**Inventory/Admin**– Need clear tools for stock recording and monitoring.

**System Administrator** – Has technical skills to manage backups, user accounts, and system security.

### 2.2 Constraints

- The system must operate only within the cafe's local network.
- Transactions must be processed within a few seconds to avoid delays.
- The database should handle limited storage capacity depending on hardware resources.
- Staff must be trained to use the system to minimize errors.

### 2.3 Assumptions and Dependencies

Assumptions: Stable power; accurate initial master data (pricing, taxes,

SKUs); staff complete basic training; business rules for discounts/voids/refunds are documented and approved.

Dependencies: Database engine (SQLite/MySQL), compatible printer and cash-drawer drivers, barcode symbology's (EAN/UPC/Code128), backup solution (local or cloud), and reliable time synchronization for audit accuracy

## 3. Specific Requirements

### 3.1 Functional Requirements

These define the specific behavior or functions of the system:3.2 Non-functional Requirements:

#### 3.1.1 Cashier Functions

- **Login/Logout** – Cashiers must be able to securely log into and out of the system to start or end their shifts.
- **Generate Receipt** – Upon successful transaction, the system must generate a customer receipt automatically.
- **View Menu** – The cashier must be able to browse through the list of available products or services for processing orders.

#### 3.1.2 Admin Functions

- **Login/Logout** - Admin users must be able to securely log in and logout of the system.
- **Login/Logout** – Admin users must be able to securely log in and log out of the system.

- **Manage Inventory** – Admins should be able to update, delete, and restock inventory items.
- **Generate Reports** – The system must generate sales, inventory, and discount reports on a daily, weekly, or monthly basis.
- **Add New Products** – Admins must be able to add new items or services to the system catalog.
- **Monitor Stock Levels** – The system shall notify the admin when the stock of any product falls below a critical threshold.

## 3.2 Non-Functional Requirements

These define the quality attributes of the system:

- **Performance** – The system should respond to cashier actions (e.g., payment processing) within 2 seconds.
- **Security** – All users credentials must be encrypted. Admin-level tasks should require additional authentication.
- **Usability** – The interface should be user-friendly, with minimal training required for new users.
- **Reliability** – The system must be stable and capable of operating continuously with at least 99.9% uptime.
- **Scalability** – The design should support future scalability to accommodate additional features or users.
- **Backup and Recovery** – System data should be automatically backed up daily and restorable in the event of system failure.

## 3.3 External Interface Requirements

This section describes the interface through which the system interacts with users and other systems.

### User Interface

- The user interface shall differ based on user roles (Cashier vs. Admin).
- Cashiers should have access to sales and transaction-related functions.
- Admins should have access to inventory, product management, reporting tools.

### Hardware Interface

- Receipt printers for transaction documentation.
- Barcode scanners for product input (optional).
- Standard POS hardware (touchscreen, keyboard, cash drawer, etc.).

### Software Interface

- Integration with a relational database management system (e.g., MySQL or PostgreSQL).
- Optional integration with third-party accounting or ERP software.

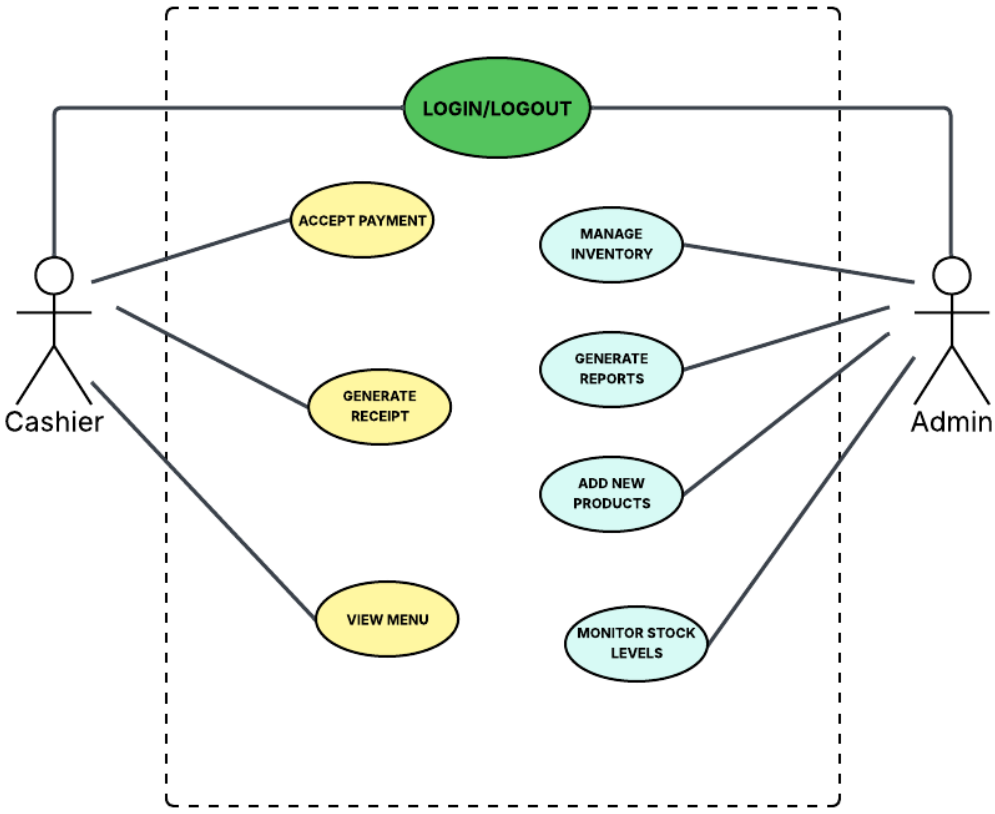
### Communication Interface

- The system shall expose a RESTful API for future integration with web or mobile platforms.
- The system may support cloud-based access for mobile monitoring by administrators.

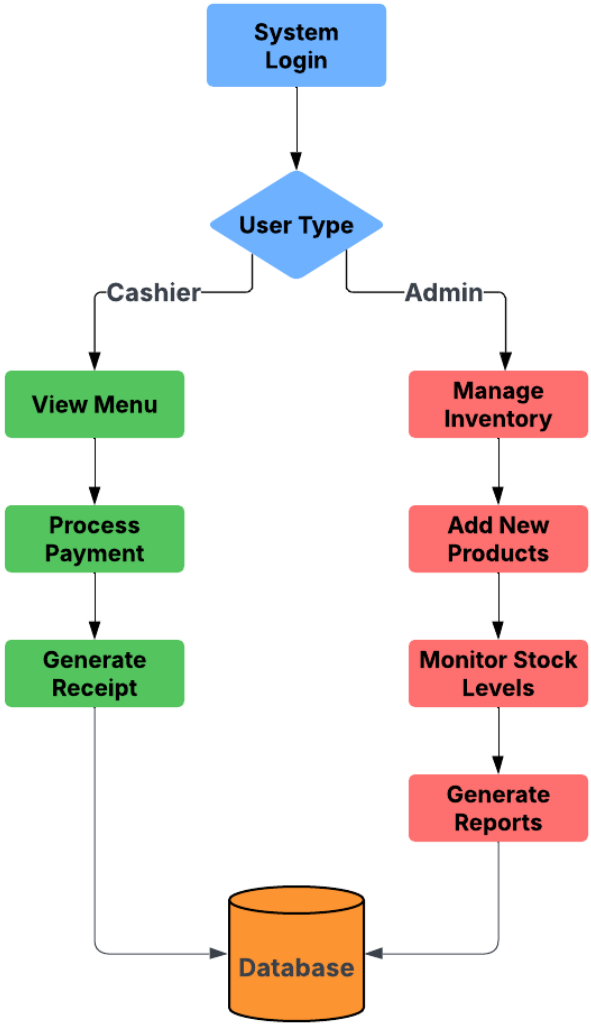
### 3.4 System Models

The following diagram illustrates the system's use case model, showing the interaction between users and the system.

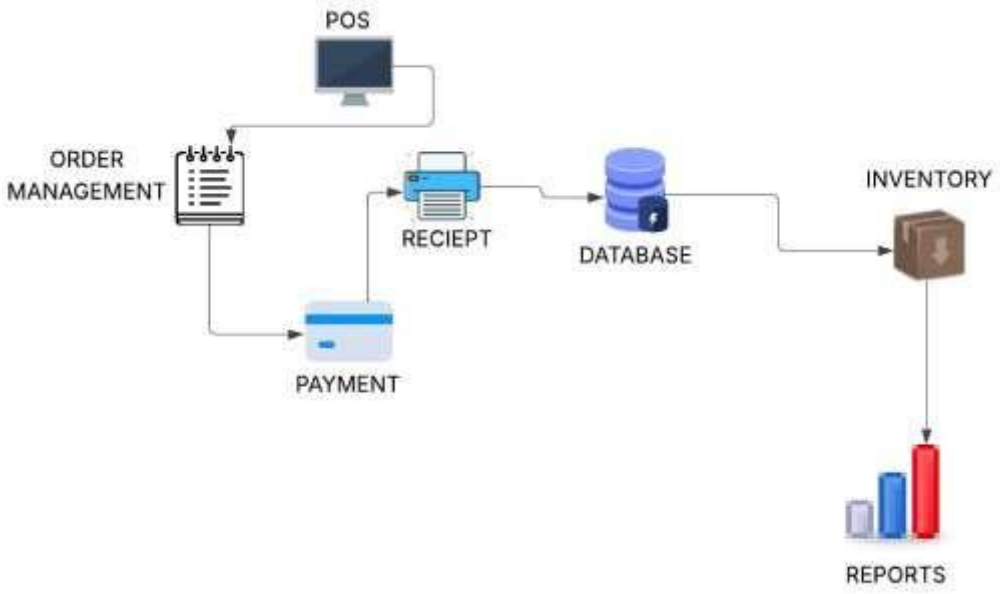
**Figure 3.1: Use Case Diagram of the POS System**



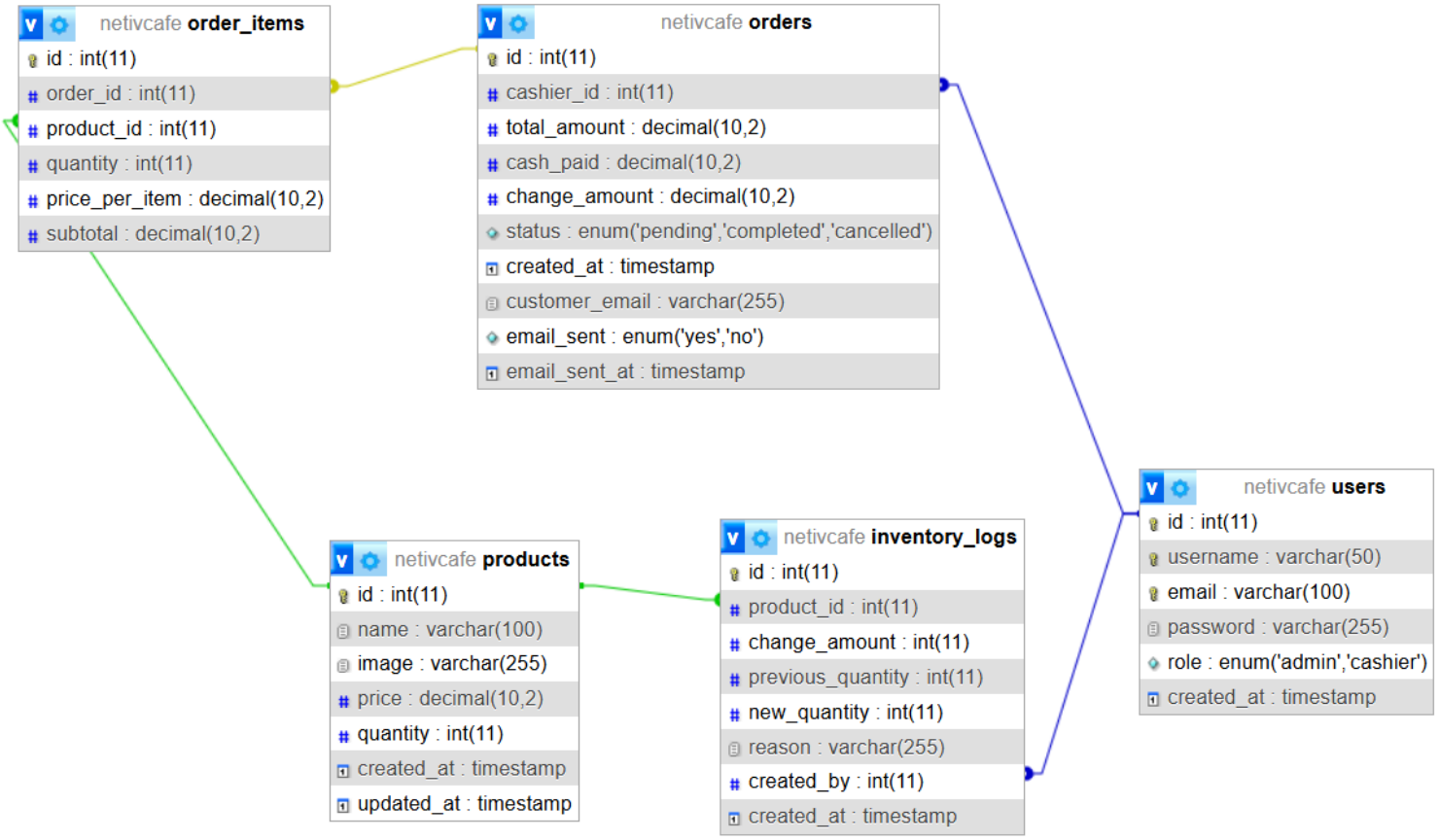
## Data Flow Diagram



## Architecture Model



### 3.5 Database Design



## 3.6 Implementation

The Netiv Café Inventory and POS Management System was developed as a web-based system using PHP, MySQL, HTML, CSS, and JavaScript. It runs on a local network using XAMPP for fast and secure operation.

**The system includes four main modules:**

**Admin Module –** manages users, inventory, and reports.

**Cashier Module –** handles orders, payments, and receipts.

**Inventory Module –** tracks product stocks and supplier details.

**Report Module –** generates daily, weekly, and monthly sales reports

The database was implemented in MySQL with tables such as admin, cashier, customer, products, orders, transactions, inventory, sales_items, receipt, reports, and suppliers. Each table uses primary and foreign keys to maintain data integrity.

The system was tested and deployed locally, ensuring that all modules—sales, inventory, and reporting—function accurately and efficiently.