



# **CAPSTONE PROJECT REPORT**

## **Report 1 – Project Introduction**

– Hanoi, January2024 –

## Table of Contents

I. Record of Changes.....	3
II. Project Introduction.....	4
1. Overview.....	4
1.1 Project Information.....	4
1.2 Project Team.....	4
2. Product Background.....	4
3. Existing Solutions.....	4
3.1 Sapo.....	4
3.2 KiotViet.....	4
4. Business Opportunity.....	9
5. Software Product Vision.....	5
6. Project Scope & Limitations.....	5
6.1 Major Features.....	5
6.2 Limitations & Exclusions.....	6

### I. Record of Changes

Date	A* M, D	In charge	Change Description
6/1/2024	A	Le Ha Nam	Added information to every part of the Project Introduction
7/1/2024	M	Le Ha Nam	Update information to every part of the Project Introduction
8/1/2024	M	Le Ha Nam	Update information to project background, Exist system, Software Product vision, Major feature
9/1/2024	M	Le Ha Nam	Update information to project background, Exist system, Software Product vision, Major feature
9/1/2024	M	Le Ha Nam	Update information of Feature tree
10/1/2024	M	Le Ha Nam	Update product background, business opportunity
11/01/2024	M	Le Ha Nam	Complete report 1 - Produce introduction

\*A - Added M - Modified D - Deleted

## II. Project Introduction

### 1. Overview

#### 1.1 Project Information

- Project name: **Eatery Management Systems**
- Vietnamese name: **Hệ thống quản lý quán ăn**
- Project code: **EMS**
- Group name: **SEP490-G11**
- Software type: **Web application**

#### 1.2 Project Team

Full Name	Role	Email	Mobile
Nguyễn Thị Hải Năng	Lecturer	NANGNTH@fe.edu.vn	0912384299
Lê Hà Nam	Leader	namlhhe153319@fpt.edu.vn	0975402493
Chu Tuấn Dũng	Member	dungcthe150178@fpt.edu.vn	0928602001
Nguyễn Phương Linh	Member	linhnphe163269@fpt.edu.vn	0336251323
Chu Hồng Long	Member	longchhe153093@fpt.edu.vn	0585703546
Chu Văn Luân	Member	luancvC@fpt.edu.vn	0981716630
Hà Tiến Dũng	Member	dunghthe151003@fpt.edu.vn	0961067718

Table 1.2: Team Member Information

## 2. Product Background

In the dynamic and fast-paced world of the food service industry, managing an eatery efficiently is crucial for success. G11 Groups introduced our cutting-edge solution, the Eatery Management System (EMS), a software designed to streamline and enhance every aspect of restaurant operations. With a focus on user-friendly interfaces and robust functionalities. Tailored to meet the specific needs of Eatery Owner, Managers, Staff, Customers, the EMS offers a comprehensive suite of features aimed at optimizing eatery management.

## 3. Existing Solutions

### 3.1 Sapo FnB

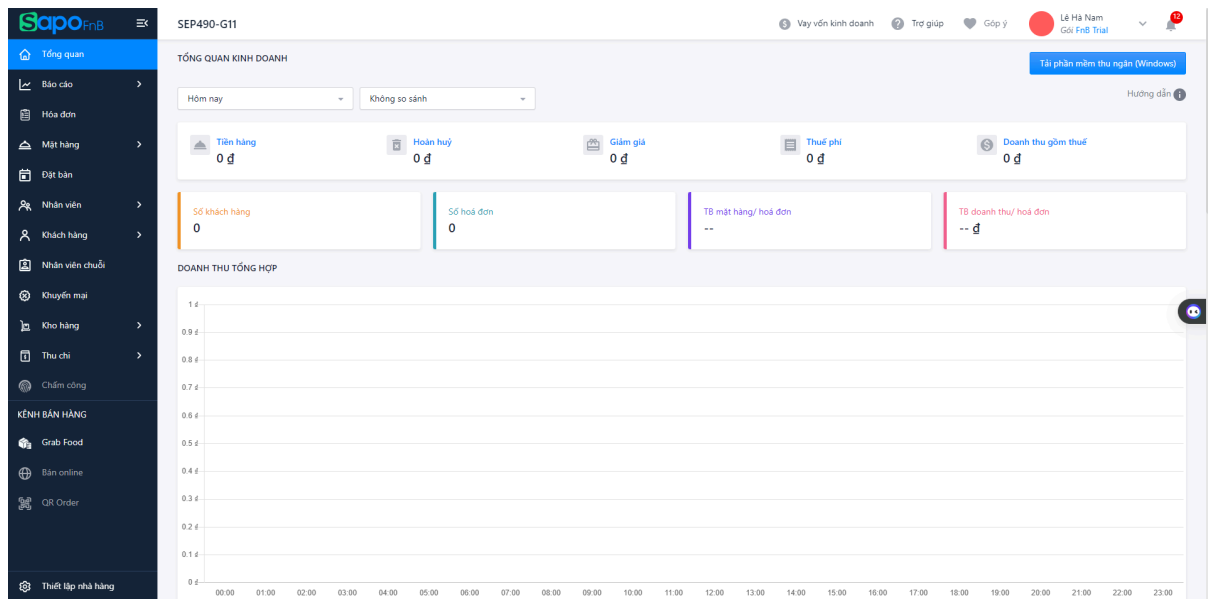


Figure 3.1: Sapo website (Link: <https://fnb.mysapo.vn/>)

The F&B Management System at [fnb.mysapo.vn](https://fnb.mysapo.vn) serves as a comprehensive solution for managing sales in the Food and Beverage industry. The system aims to streamline and optimize various aspects of sales operations, catering to businesses ranging from cafes and restaurants to larger establishments.

### 3.1.1 The system actors:

- Eatery owner
- Managers
- Staff
- Customers
- Waiter

### 3.1.2 Sapo FnB has the following modules:

#### 1. Admin Module:

-User Management:

+Create, modify, and deactivate user accounts.

+Assign roles and permissions based on job responsibilities.

-Configuration:

+Customize system settings, including tax rates, currencies, and business information.

#### 2. Manager Module:

-Menu's product Management:

+Add,edit,remove menu items

- +Set prices, manage availability, and categorize products.

- Sales Monitoring:

- +Access real-time sales data and generate reports.

- +Monitor performance metrics, best-selling items, and trends.

- Staff Management:

- +Create and manage staff schedules.

- +Evaluate staff performance and track attendance.

### **3. Staff Module:**

- Order Processing:

- +Receive and process customer orders.

- +Update order status, communicate with the kitchen, and manage table assignments.

- Inventory Management:

- +Track stock levels and receive alerts for low inventory.

- +Manage supplier information and streamline procurement.

### **4. Customer Module:**

- Online Ordering:

- +Browse the menu, customize orders, and place them online.

- +View order history and save preferences for future orders.

- Order Tracking:

- +Monitor the real-time status of their orders.

- +Receive notifications for order updates and estimated delivery times.

### **5. Waiter Module:**

- +Engaged in order processing, customer service, table service.

#### **3.1.3 Advantages:**

- Operational Efficiency: Streamlines sales operations, reducing manual errors and optimizing processes.

- Data-Driven Decision Making: Managers gain valuable insights from sales data to make informed business decisions.

- Improved Customer Experience: Enables online ordering, order tracking, and personalized customer service.

-Real-time Monitoring and Reporting

#### **3.1.4 Disadvantages:**

- Scalability Concerns:

+Potential Performance Issues: As the business grows, there may be concerns related to system scalability and performance.

+Hardware Upgrades: Increasing demands may require hardware upgrades, adding to the overall cost.

- Cost Implications:

+Initial Investment: Implementing and customizing the system may involve significant upfront costs.

+Maintenance Expenses: Regular updates and maintenance might contribute to ongoing expenses.

- Potential Security Risks:

+Data Security: The system's reliance on user accounts and online features may pose security risks if not adequately protected.

+External Integration Risks: Integrating with external systems may expose the system to potential security vulnerabilities.

#### **3.1.5 Conclusion:**

The F&B Management System at [fnb.mysapo.vn](http://fnb.mysapo.vn) demonstrates a robust platform tailored for the dynamic needs of the food service industry. The comprehensive modules cater to each actor, ensuring an integrated and efficient workflow. Continuous monitoring, user feedback, and adaptation to industry trends will contribute to the system's ongoing success and relevance in the market.



Figure 3.1.1: Illustrative photo of actual survey

### 3.2 KiotViet

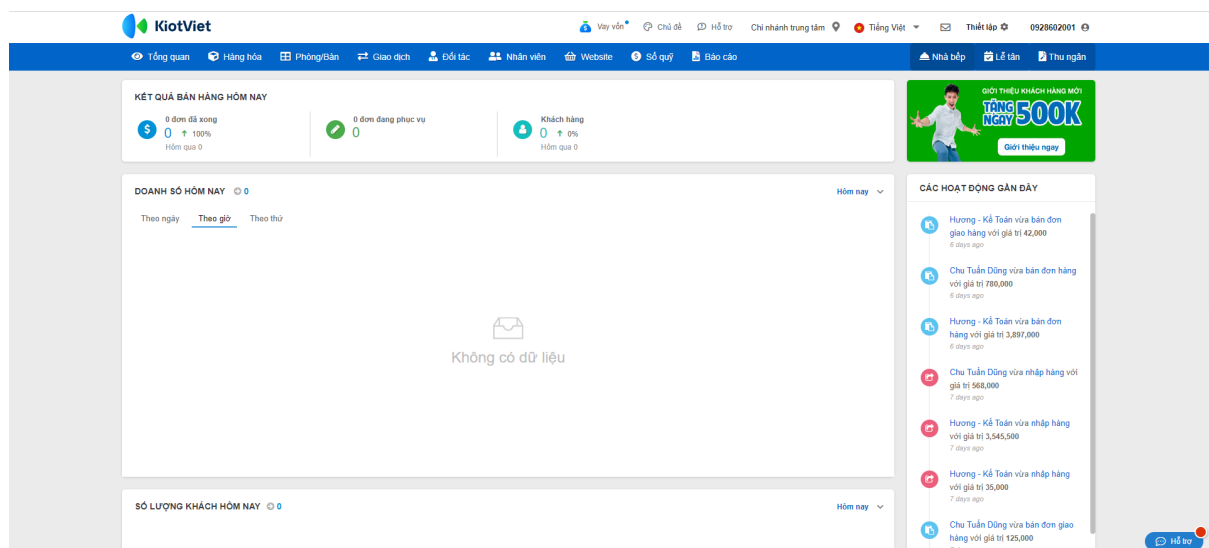


Figure 3.2: KiotViet website (Link: <https://www.kiotviet.vn/>)

Kiotviet is a sales management software commonly used in Vietnamese businesses. This Kiotviet software has the ability to help businesses manage a simple sales process without losing too much cost.

The system actors:

- Admin
- Staff (Accounten ,Employee)



- Partner (Customer,Supplier,Delivery Partner)

KiotViet has the following modules:

- Overview
  - Commodity management
  - Room/Table management
  - Transaction management
  - View partner
  - Staff Management
  - Fund management
  - View statistical
- Advantage:
    - + Revenue management is extremely simple.
    - + Improve sales performance.
    - + Employees will be managed in the most professional way.
    - + Minimize loss of goods in the warehouse.
  - Disadvantage:
    - +Depends on the internet.
    - +Limited interactivity.
    - +Cost.

## **4. Business Opportunity**

### ***4.1 Market Expansion:***

-Targeting Diverse Businesses: Identify opportunities to tailor the system for various types of eatery, including cafes, mid-range eatery, and quick-service establishments.

### ***4.2 Enhanced User Experience:***

-Customer Engagement Features: Introduce additional customer engagement features within the Customer module, such as order with QR at the table in eatery.

-Intuitive Interfaces: Continuously improve user interfaces for all roles, ensuring a seamless and user-friendly experience.

### ***4.3 Integration with Emerging Technologies::***

-The EMS interface enables staff to execute transactions quickly and accurately, reducing wait times for customers ,efficient and secure payment processing..

#### **4.4 Analysis of Sales and Trends:**

-EMS systems provide detailed reports on sales performance, helping you understand customer shopping trends and adjust business strategies accordingly.

#### **4.5 Contactless Ordering and Payment:**

-Enhance the EMS interface to support contactless ordering through QR codes, reducing physical contact and enhancing safety.

#### **4.6 Sustainability Initiatives:**

-Green Practices and Waste Reduction:

+Introduce features that promote sustainability, such as digitized menus to reduce paper usage.

### **5. Software Product Vision**

In the ever-evolving landscape of the culinary industry, the Eatery Management System (EMS) is envisioned as a transformative solution designed to empower eatery, particularly medium- and small-sized establishments, to thrive in a competitive market. Our EMS aims to revolutionize the way eatery operate, delivering a seamless and intelligent platform that enhances every facet of their business.

## **6 Project Scope & Limitations:**

### **6.1 Major Features:**

#### **6.1.1 Common**

FE-1: Login.

FE-2: Logout.

FE-3: Change Password.

#### **6.1.2 Staff**

##### **- Cashier:**

FE-1: Manage bill:Search & Filter Order,View list bill ,View detail bill

FE-2: View transaction: view transaction ,view detail transaction

##### **-Chef:**

FE-1:View list order dish,View list finished dish,Update status order dish

##### **-Waiter:**

FE-1:Manage Order:Create order,Edit order,Confirm order,View Menu, Filter Dish,Search Dish,View lish order,View waiting dishes,Filter dish,Search dish,View

delivery dish, View waiting dish list, View served dish list, View menu, View Finish Dish List

FE-2: Mange Cart: Add to cart, View cart

FE-4: View list table, Filter table by status

FE-5: Confirm bill

FE-6: Receive Support Notification

### **6.1.3 Eatery Owner**

FE-1: View Dashboard: The dashboard provides a comprehensive view of real-time data across various aspects of the restaurant's operation.

FE-2: Manage Product: View List Product, View Product Details, Create Product, Edit Product, Delete Product, Search Product, Change Status Product

FE-3: Manage Category: View List Category, View Category Detail, Create Category, Edit Category, Delete Category, Search Category, Change Status Category

FE-4: Report Statistic: View report Revenue of eatery

FE-5: Manage Transactions: View Transactions, View Detail Transactions, View List Bill, View Detail Bill

FE-6: Manage Table: View List Table, Create Table, Edit Table, Delete Table

### **6.1.4 Customer**

FE-1: View menu, search/filter menu,

FE-2: Manage Order: Create order, update order, view orders (filter by status).

FE-2: Contact: Call staff.

### **6.1.5 Manager**

FE-1: Manage Product: View Display List Product, Create Product, Update Product, Delete Product, View product information (filter, detail, search)

FE-2: Manage Category: View List Category, View Category Detail, Create Category, Edit Category, Delete Category, Search Category, Change Status Category

FE-3: Manage Account:

- Staff:
- + View List User, View Detail User, Create User, Delete User
- + View staff information (filter), create staff, update staff information, change staff status.

FE-4:Manage Transactions:View Transactions,View Detail Transactions,View List Bill,View Detail Bill

FE-5: Manage table: View table information(filter, detail, search), update table information, delete table.

FE-6: Manage menu: Update, view menu information,Search/Filter,Change the status of dishes

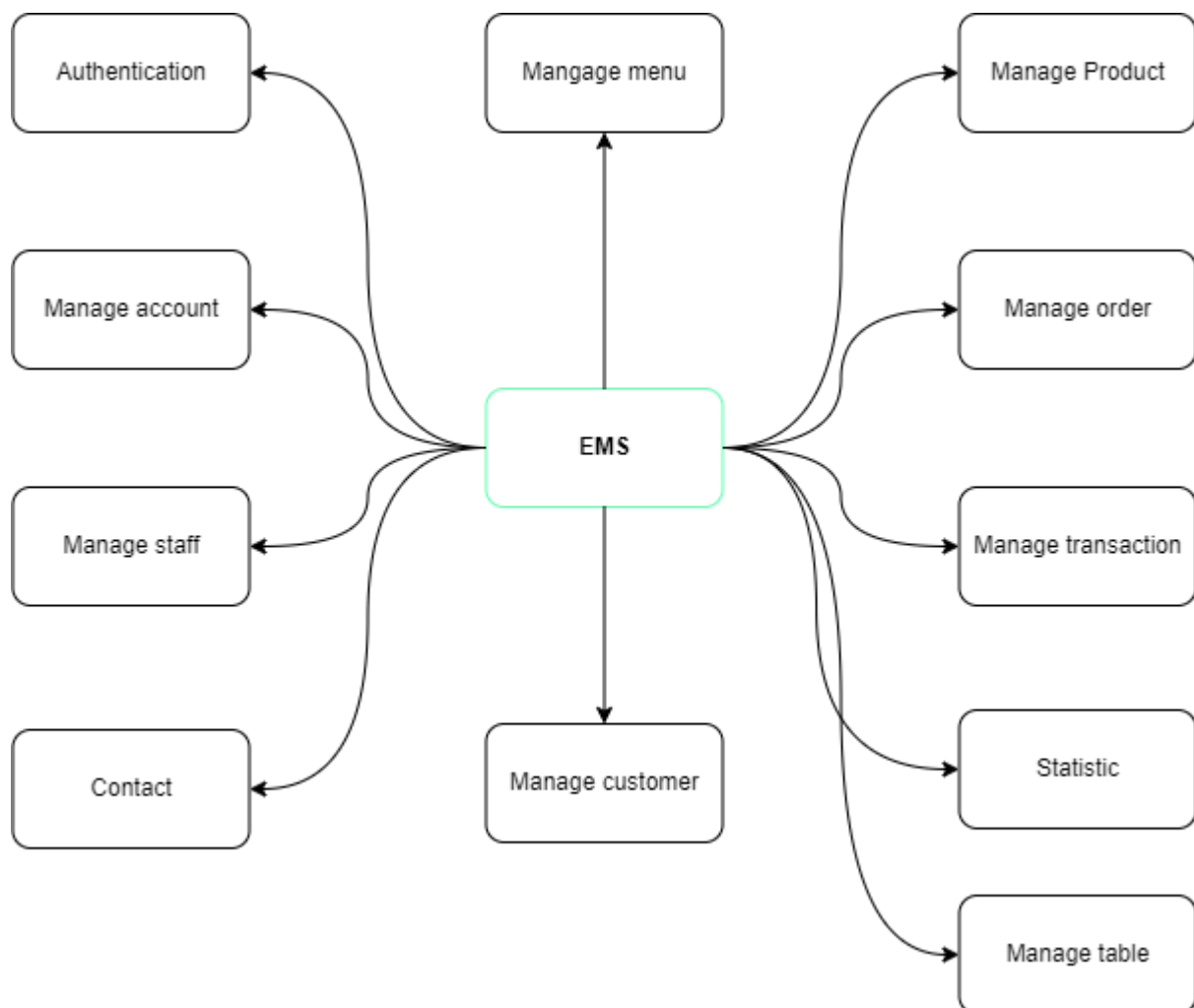


Figure 6.1.Major features

## 6.2 Out of Scope:

- + ) Cash book management
- + ) Timekeeping

- + Warehouse report
- + Membership card
- + Payroll
- + Commission
- + Customer management
- + Promotion
- + Exchange gifts
- + Report revenue after shift

### **6.3 Limitations:**

-While the EMS aims to be a comprehensive solution for eatery management, there are certain aspects that fall outside the defined scope:

#### **LH-1: Advanced Financial Management**

-The RMS focuses on basic financial aspects related to sales. Advanced financial features, such as detailed accounting and budgeting, are beyond the current scope.

#### **LH-2: Customer Relationship Management (CRM)**

-CRM functionalities, including detailed customer profiles, targeted marketing, and loyalty programs, are considered out of scope for the initial version of the EMS.

- The EMS only supports Vietnamese

#### **LH-3: External Integrations:**

Integrations with third-party services or external systems (other than payment gateways) are not within the current scope.

#### **LH-4: Mobile App Development:**

-While the EMS may have a web-based interface, the development of dedicated mobile applications for iOS or Android platforms is not included in the current scope.

#### **LH-5: Supplier of food:**

-It is impossible to check whether a supplier meets business standards because it can only be done through direct inspection of that supplier.