**PROJECT DESCRIPTION**

**Cafe Management System**

**Code course: PRN221**

**Group name: 09**

**Members of Group:**

**1.Nguyễn Đình Minh**

**2.Đào Ngọc Minh**

# Introduction

In today's digital age, coffee shop management has become more complicated than ever. With the rise of the food industry and growing demands from customers, we need an effective solution to optimize management, enhance customer experience and ensure the success of coffee pub.

Coffee shop management application includes main functions:

1. Installation and warehouse management:

- Monitor stock status and set stock information based on historical data.

- Automatic ordering unit to avoid material shortages or waste.

2. Employee management:

- Monitor employee working time and schedule work effectively.

- Manage salary calculation and penalty system.

3. Order and payment management:

- Manage orders from customers, easily add/remove dishes and process payments.

- Integrate electronic payment methods to create a convenient shopping experience for customers.

4. Data analysis and reporting:

- Provide reports on profit, revenue, and development of the coffee shop.

- Helps you better understand customer preferences to optimize menus and services.

# Project Objectives

In this project, Group 09 will:

* Use the Visual Studio.NET to create Windows Presentation Foundation (WPF) and Class Library (.dll) projects.
* Perform CRUD actions using Entity Framework Core.
* Use LINQ to query and sort data.
* Apply passing data in the WPF application.
* Apply 3-Layers architecture to develop the application.
* Apply MVVM (Model-View ViewModel) pattern in the application.
* Apply Dependency injection (DI) in the application.
* Apply Repository pattern and Singleton pattern in a project.
* Add CRUD and searching actions to the application.
* Apply to validate data type for all fields.
* Run the project and test the WPF application actions.

# Database Design

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# Main Functions

* - Member management, Product management and Order management, Table status management: Read, Create, Update and Delete actions. Create and update actions must be performed using popup dialog boxes.
* - Search products by ProductName (by keyword ProductName).
* - Edit Profile: update avatar, password, username.
* - Create a sales statistics report by period from Start Date to End Date and sort sales in descending order. Revenue statistics exported to excel file.
* - Authenticate members by Email and Password. If the user is “Admin” then all actions are allowed, otherwise normal users are allowed to view/create/update profile and view their order history.

**Role of members**

[Project plan PRN221](https://docs.google.com/spreadsheets/d/1wGzfi1FifKeT4G-a6-JygMiD6A0PujdIjs5l2kH_Gtg/edit?usp=sharing)