

**STAFF MANAGEMENT AND FINGERPRINT LOGIN MODULE OF SHOP
MANAGEMENT SYSTEM**

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**A thesis submitted in fulfillment
of the requirements for the award of the degree of
Bachelor Of Computer Science and Software Engineering**

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MAY 2010

ABSTRACT

Some of the small clothing stores or boutique shops are using different system to running different business activities such as cashier machine to handle business transaction, manually record stock information and staff personal detail or even not recording the information at all. For security and authentication level, this system used fingerprint authentication system to login to system. Fingerprints or thumb prints are the oldest and the most commonly known biometric and users can never change their unique identifier. Shop Management System will allow staff to take their attendance with using thumb print. Thumb print sign-in system will collect Staff attendance and calculate how many staffs are attended in the day. Besides, this system can check who were absent or late. Thumb Print system also more simply and secure it is because biometrics cannot be duplicated or hacked. It is also not necessary to remember unique user ID and password to gain entry to login into the system.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Some of the small clothing stores or boutique shops are using different system to running different business activities such as cashier machine to handle business transaction, manually record stock information and staff personal detail or even not recording the information at all. Normally the problem caused by the shop are just started the business or still in growing of the business, method using to running daily operation of the management activities are not performed efficiently. Shop Management System is a software application to be developed to manage most of the activities or tasks running in a boutique shop. This system has divided to three main modules that are cashier and stock management, supplier information management and generating report, and fingerprint authentication and staff management. This application will provide features such as cashier to handle sales transaction, stock management to control stock availability, staff information management to handle employee details, supplier information management for purchasing order and generating report.

For supplier information management, we can use the supplier information stored in system database to generate purchase order which can be print out used to order stock. User able to choose the stock from existing stock list or user can key in new kind of stock for ordering. After selection, purchase order in standard format will be generated and printed out. For generating report function, this system can generate a report which contained the information of monthly and annual sale of the shop stored in the database.

By combining these features together in one system to managing the shop activities are much easier than using different kind of applications which may costly, wasting time and inefficient. Besides, Shop Management System can provide a better security to manage business activities compared with manual recording method in business management, other issue such as authenticated user to access administrative tasks will easier to control by using a main system in a shop.

For security and authentication level, this system used fingerprint authentication system to login to system. Fingerprints or thumb prints are the oldest and the most commonly known biometric and users can never change their unique identifier. Shop Management System will allow staff to take their attendance with using thumb print. Thumb print sign-in system will collect Staff attendance and calculate how many staffs are attended in the day. Besides, this system can check who were absent or late. Thumb Print system also more simply and secure it is because biometrics cannot be duplicated or hacked. It is also not necessary to remember unique user ID and password to gain entry to login into the system.

Shop Management System designed to provide user easier, faster and efficiency way on managing small boutique shop in.

1.2 Problem Statement

Based on our case studies, we found several problems when using the current manual system module. There are:

- i. To avoid staff doing “buddy-punching” it means helping other staff to login their attendance when the users are not there.
- ii. To avoid staff forget or lose the ID and password.

1.3 Objective

The objectives to create Boutique Shop Management System are:

- i. To manage the system become more secure and cannot be duplicated and hacked to avoid the ‘buddy-punching’.
- ii. All users having a unique identifier with their own finger to avoid some case forgot their ID and password.

1.4 Scope

The scopes of my module in this system which is Fingerprint login and staff management.

- i. Finger Print login is provided Staff to use in login within using ID and password.
- ii. Staff management in shop management system only allow staff using finger print to login into the system, other staff will not able to helps other staff login
- iii. Supervisor, cashier and Sales of the shop will use this system. Only supervisor will have the authority to register new staff into the system.

CHAPTER 2

LITERATURE REVIEW

2.1 Module Overview

Shop Management System (SMS) is a software application to be developed to manage most of the activities or tasks running in a boutique shop. This system has divided to three main modules that are cashier and stock management, supplier information management and generating report, and fingerprint authentication and staff management. The system module covered in this document is the cashier and stock management module.

Fingerprint Login function is used help staff can login more efficiency and easily login. This design of login functionality is refer to the existing system to meet the normal requirements of the shop management system. For the Registration, in these interface will provide the supervisor to register using this form and also using the fingerprint scanner to register as login staff. For the PersonalInfo interface, this interface allow supervisor to search staff information, update staff information, delete staff information and show staff performance.

The main feature in this module is focused on how the applications using the login form to matching their fingerprint with using fingerprint scanner. Supervisor can add new employee using registration form, this form will need to fill the require information and the system allow supervisor to search , delete, update and show performance in the personalinfo interface.

2.2 Analysis of system module

For Login feature in Shop Management System, the main entity is the users which have three actors can access the login function. The authorized users are supervisor, cashier and sales, which allow fingerprint or ID and password to login into the main menu.

For registration feature in Shop Management System, the main entity user will only the supervisor that allowed to authorize into register form. In this form supervisor can register new employee. Fingerprint scanner also used in this class to register for the fingerprint login.

For the personalinfo feature in Shop Management System, the main entity also only supervisor. In this feature supervisor are manage staff using search staff information, update staff information, delete staff information and show performance for a staff.

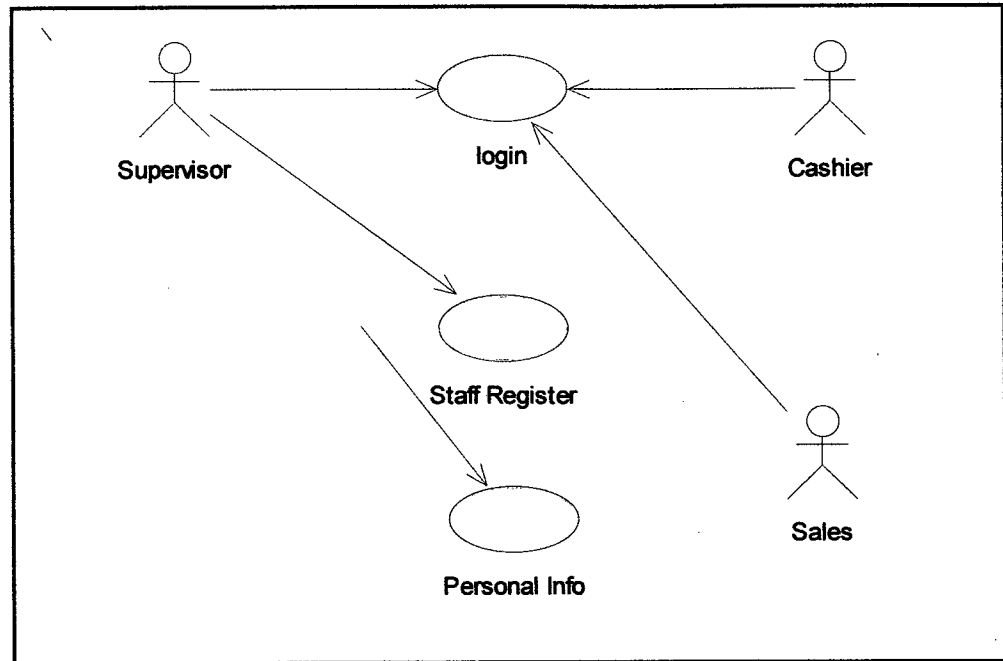


Diagram 2.1 : Use Case diagram of Staff Management and FingerPrint Login module

2.3 Analysis of existing system

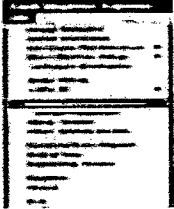
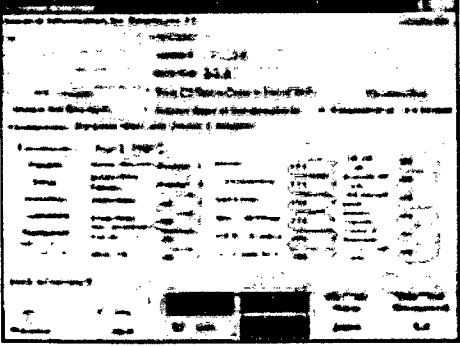
PCAmerica is a software application that provides variety of features on management of a restaurant, liquor store or retail shop. Main functions are login, cash register, stock management, staff management, supplier management and reporting. In Staff Management and Fingerprint Login module, the login and staff management in PCAmerica are relevant to the module. Those function will be referred as the common requirements for the module and apply in the SMS, and some extra feature will enhance the existing system such as staff can use fingerprint to login into system.

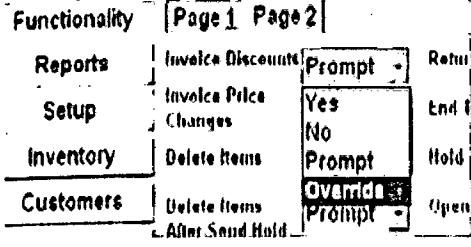
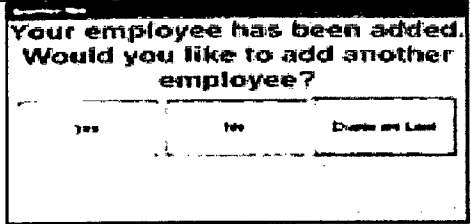
2.3.1. Add Employees into the System

Employees are configured within the 'Employee Maintenance' screen of Cash Register Express.

Cashiers and servers must be added into the system before they can log in and ring up sales. Other types of employees can be added and their hours tracked within CRE, even if their jobs don't require them to use the POS. The steps below describe how to add your initial cashier into CRE; the 'Employee Maintenance' section later in this manual will describe additional employee options, job codes and how to record employee hours. Step 3 [2].

Table 2.1 : Login and add employee into system

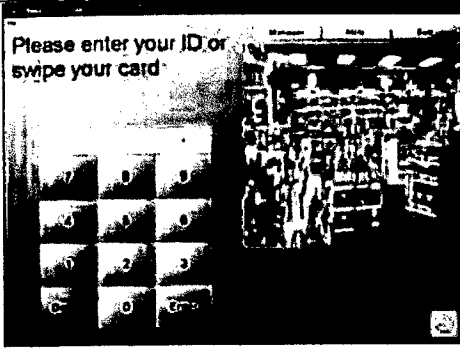
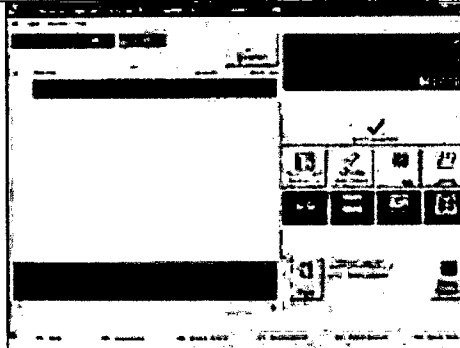
	<p>1. From the 'Login Screen', select 'Employee Maintenance' from the 'File' menu. Only the administrator can access this screen; enter the default administrator password 'admin' (without the apostrophes) to proceed.</p>
	<p>2. Click the 'Add Employee' button to create a new employee record. Assign a unique Employee ID (which could be their initials or some other unique identifier), password and a 'Display Name' that prints on the receipt.</p> <p>If you would like to assign a secure login card to this</p>

	<p>employee, swipe the card in the 'Card Swipe ID' box.</p>
 <p>The screenshot shows a 'Functionality' menu with the following items: Reports, Setup, Inventory, and Customers. A dropdown menu is open, displaying the following options: Prompt, Yes, No, Prompt, Override, and Prompt. The 'Override' option is highlighted.</p>	<p>3. Assign security permissions by touching the dropdown list and selecting Yes (the employee can do this), No (they can not), Prompt (they can with manager's permission) or Override (they can and are a manager for this function.)</p>
 <p>The screenshot shows a confirmation dialog box with the text: "Your employee has been added. Would you like to add another employee?". Below the text are three buttons: "Yes", "No", and "Cancel and Login".</p>	<p>4. Touch the 'Save' button. Your employee has been added! Add any additional employees you wish to configure and then touch the 'Exit' button to go back to the Login Screen.</p>

2.3.2 Login to the System

Cashiers must login to Cash Register Express before they can ring up customers or enter orders. The 'Login Screen' prompts cashiers for a user name and password, or alternatively the cashier can swipe their card to gain access.[2]

Table 2.2 : Login system

	<p>1. To log into CRE, simply enter your ID and password (default for the demo is '01' and 'admin'), enter the employees pin code or swipe the secure login card you configured in the 'Employee Maintenance' screen in Step 3 above.</p>
	<p>2. Once you have logged in to CRE the invoice screen will appear. Once your system is setup, most of your pos experience will take place in the invoice screen. From this screen you can easily access many of the setup options and do all of your cashing.</p>

A secure login card helps prevent one cashier from logging in as a different cashier (which is a hole for theft.) Without a secure login card, cashiers must type in a user name and password, which is visible to others close by. The only way to log in with the card is to swipe the card, protecting the cashier's cash bank from others trying to steal money. You can buy these cards from pcAmerica.[2]

2.3.3 Overview and System Security

On the surface, Cash Register Express is a very simple to use point of sale system. Cashiers can ring up customers quickly and accurately. Behind the scenes, however, your Cash Register Express retail point of sale system consists of multiple components, functioning together, that run on the Microsoft Windows operating system. Likely your computers are connected to the Internet for e-mail, credit card processing and a variety of other uses. In today's world of computers a variety of risks (both internal and external) exist that you should protect against.[2]

Viruses and worms are malicious programs written by outsiders that can cause serious damage to your data or even your computer. Unknown to you, these can be downloaded and installed on your computer by visiting an infected web page, downloading and running malicious programs or by an outside intruder accessing your computer from a different continent via the Internet. To protect yourself you should do the following:[2]

- Install a router, which is an Internet buffer between you and the outside world. Routers help control who can access your computer and will help keep unwanted intruders out. Popular brands of routers include LinkSys and DLink, however you should do your homework and choose the router you feel most comfortable with.

- **Install and activate a firewall which is an additional layer of protection against outside intruders.**
- **Anti-virus and anti-worm software runs on your computers and, if configured properly, can actively watch each of your actions and put on the brakes if you are about to download or use an infected file. It's important to scan your hard drive regularly for viruses and also keep current with the latest virus updates (which can change very frequently.) Popular brands of anti-virus software include Symantec (Norton Anti-Virus) and McAfee, however you should do your homework and choose the anti-virus software you feel most comfortable with.**
- **Spy ware is another malicious form of software that can sneak onto your computers. The effects of spy ware vary from slowing down your computer to revealing your personal information with a wide array in between. Many anti-virus packages also protect you against spy ware, however you can also download additional packages that can scan for spy ware, eliminate it and protect against future infections.**
- **Hardware and database failure, while extremely uncommon, is a reality of life that you should protect against. Lightning may strike – literally – and fry a hard drive or files on your computer. The two best ways to protect against this are fairly simple. The first is to have a surge protector unit with a battery backup; common brands are APC and SmartPower, however you should do your homework and pick the one you are most comfortable with. The second way to protect yourself is to perform daily backups of your data that you keep off-site.**

2.3.4 Changing the Administrator Password & Administrator Swipe Card

There are two types of passwords inside of Cash Register Express.

Employee passwords are passwords that are assigned to an individual employee. A description of the use and configuration of the employee password is discussed in the 'Tracking your Employees' section.

The administrator password is the "super password" of the system which can be used to access any function inside of the software. This password should only be known to the owner and the administrator of the system. Standard employees and managers should not receive this password.

The screenshot shows a software window titled "Change Password". Inside the window, there is a "File" menu at the top left. Below the menu, the text "Change Administrator Password" is displayed. Underneath, there are three input fields labeled "Old Password", "New Password", and "Verify New Password". At the bottom of the window, there are three buttons: "Enter Administrator Swipe", "Update", and "Cancel".

Figure 2.1 : Change Password Screen

By default, the password is 'admin' you should change this Day 1 of using the system to enhance your security. To change your password, choose the 'Change Password' menu link under the 'File' menu in the 'Login Screen.'

You can also create an administrator swipe card using the 'Change Password' screen. Swiping an administrator card takes the place of typing in the password, providing for faster and more secure overrides.[2]

2.3.5 Employee Maintenance – Adding & Modifying Employees

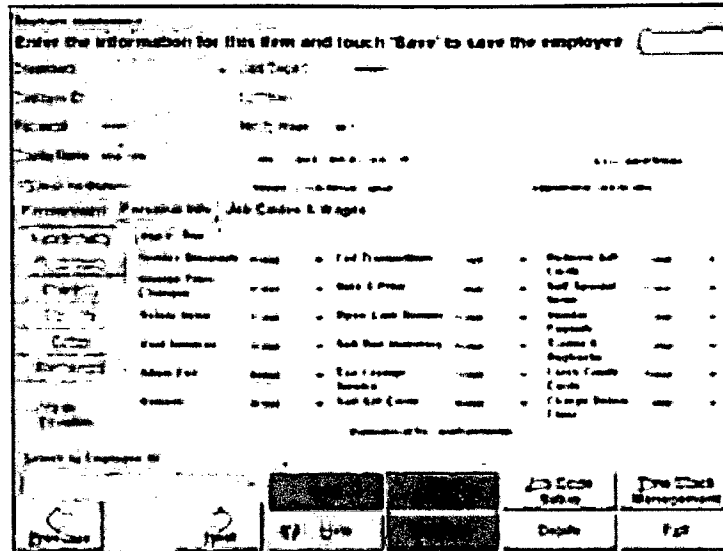



Figure 2.2 : Adding & modifying employee

It’s important to track your employees and configure functions they have access to within your point of sale system. Employees and security, as well as job codes and other employee settings, are configured in the ‘Employee Maintenance’ screen, which can be accessed from the ‘File’ menu of the ‘Login Screen.’ A full tutorial of this screen is in the built-in F1 help section; below are some basic pointers to get you started.

The basic steps of how to add an employee are included in step three in the ‘10 Steps to Getting Started’. Modifying an employee is just as simple; navigate to the employee using the buttons in the bottom left corner of the screen, modify the employee and click or touch the ‘Save Changes’ button to update the employee.[2]

Table 2.3: Swipe Cards and Security

 <p>The logo for pcAmerica, featuring a small square icon to the left of the text "pcAmerica".</p>	<p>The fastest and most secure way to log an employee into the system is to use a POS Access Card. Alternatively an employee can use a pin number or their username and password, which is not as secure because another employee may watch the login number typed in over their shoulder. When an employee needs to log in or clock in\out of the system or a manager needs to provide override permission, they can simply swipe their card which is faster, easier and more secure than a pin code or user name. POS Access cards can be purchased directly from pcAmerica.</p>
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