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USER'S MANUAL GUIDE

For Automated Banking Machine

Document Version 1.0

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Revisions

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1.0	Chebaro , Khaled Jafar, Yaser Pereira, Orin	Complete the first Version of the User's Manual Guide that outlines the Features as well as provides operating instructions.	11/26/2007

1 Introduction

1.1 Purpose

The purpose of this document is to provide an operational manual for the Automatic Banking System (ABM) system developed by KYO Engineering Consultants Inc. It is intended to provide the user with assistance in using the banking system and the owner with a reference document to be used in the future.

1.2 How to Use the Document

The following document is divided in to various sections as seen in the table of Contents. The manual walks through the features of the system depending on the user's interaction with the system. This interaction can take place in the form of the bank user, the bank manager and the bank operator. The following figure portrays different users' interactions as well as an overview of the ABM system.

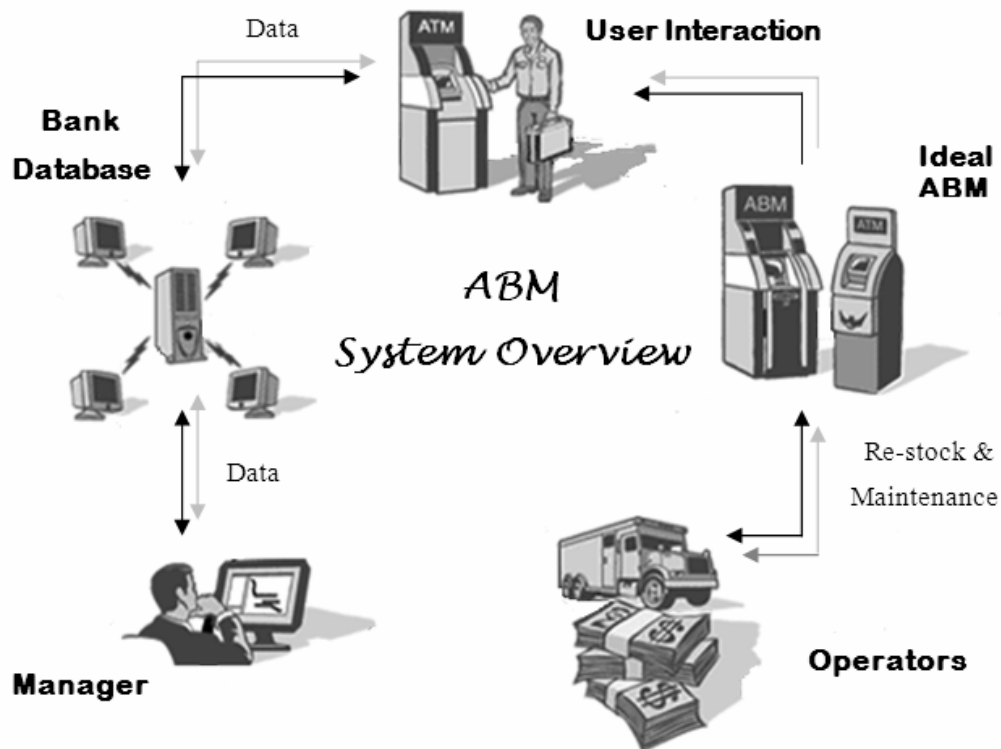


Figure 1: Overview of the ABM Machine for MacBank Inc.

1.3 Definitions, Acronyms and Abbreviations

Listed below are the various definitions, acronyms and abbreviations used in this document:-

ABM-Automated Banking Machine

GUI – Graphical User Interface

LAN – Local Area Network

PIN – Personal Identification Number

SDS – Software Design Specification

SRS – Software Requirement Specification

1.4 Supporting Materials

The following standards apply:

J-STD-016-1995 IEEE/EIA Standard for Information Technology, Software Lifecycle Processes, Software Development, Acquirer-Supplier Agreement

IEEE-STD-P1063 IEEE Standard for Software User Documentation

The following texts and documents have been used in the process of developing this document:

[1] J. Rumbaugh et al. *Object Oriented Modeling & Design*, Upper Saddle River, NJ: Prentice Hall, 1991.

[2] C. Ghezzi et al. *Fundamentals of Software Engineering*. Upper Saddle River, NJ: Prentice Hall, 2003.

[3] K. Chebaro, Y. Jafar and O. Pereira, Software Requirements Specification for Automated Banking Machine, 2007.

[3] K. Chebaro, Y. Jafar and O. Pereira, Software Design Specification for Automated Banking Machine, 2007.

2 User Interfaces for Customers

The ABM software comprises of various interfaces that navigates the user and performs various banking transactions. The software facilitates an easy to use approach and provides quick buttons to perform transactions faster.

Listed below are various screens that are presented to the user.

2.1 Welcome & PIN Entry Screen

This is the first screen the user uses to interact with the banking machine. It displays a welcome message greeting the customer as shown in Figure 2.

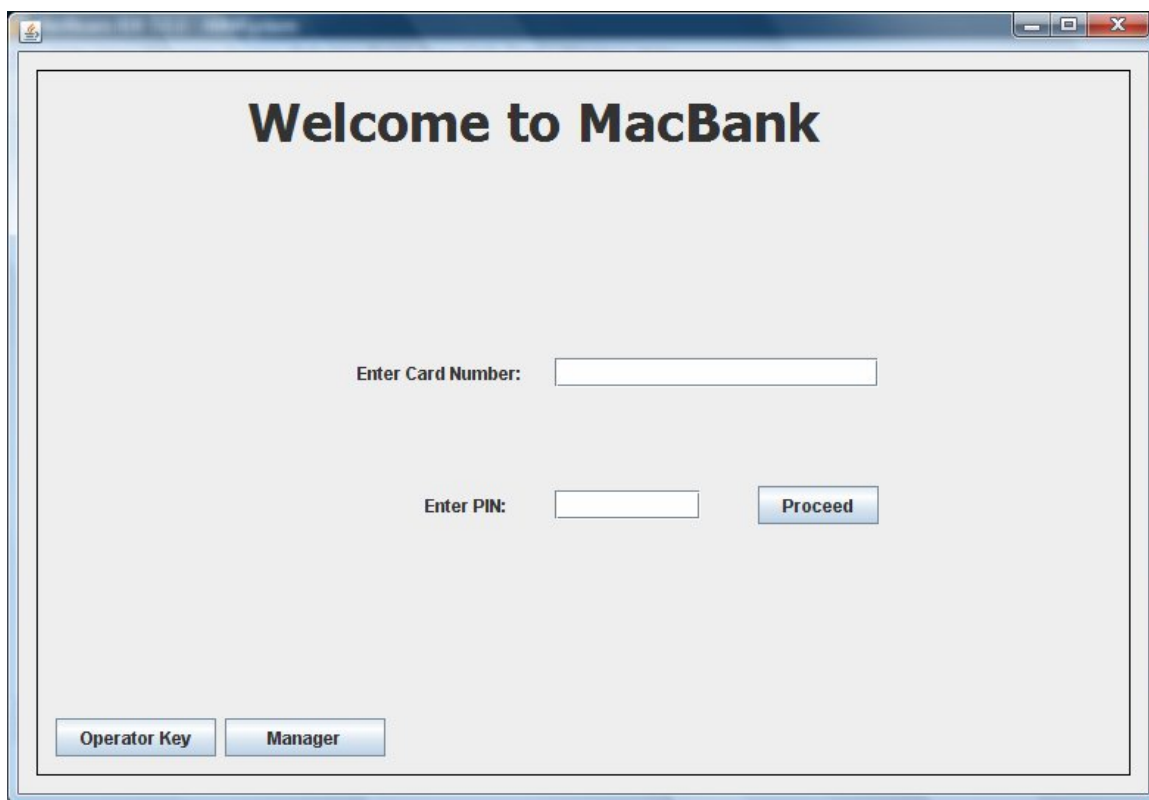
The image shows a software window titled "Welcome to MacBank". Inside the window, there is a large heading "Welcome to MacBank" at the top. Below the heading, there are two input fields. The first is labeled "Enter Card Number:" and has a text box next to it. The second is labeled "Enter PIN:" and has a text box next to it. To the right of the PIN input field is a button labeled "Proceed". At the bottom left of the window, there are two buttons labeled "Operator Key" and "Manager". The window has a standard Windows-style title bar with minimize, maximize, and close buttons.

Figure 2: Welcome Screen for the ABM machine of MacBank Inc.

This screen prompts the customer to enter the MacBank card and PIN number into the appropriate fields. Each number will be represented by a star on the screen as seen in Figure 10. The Proceed button verifies the PIN with the bank's database and if successful navigates the user to the screen which displays different types of bank accounts. If the PIN entered is incorrect, the system prompts the user to enter the PIN again. If the user enters the PIN incorrectly two more times, the system blocks the user's bank account. The customer must then contact the bank staff to reset the account once the person's identity is verified.

2.2 Types of Accounts

This screen displays different accounts MacBank offers its customers as seen in Figure 3. The different types of accounts are Chequing, Saving, Credit Card and Line of Credit. Each selection leads the customer to the next screen which displays different types of banking activities provided by the ABM machine. The GUI provides the user with the option to “**Cancel**” their interaction returning the user to the Welcome screen as seen in Figure 2.

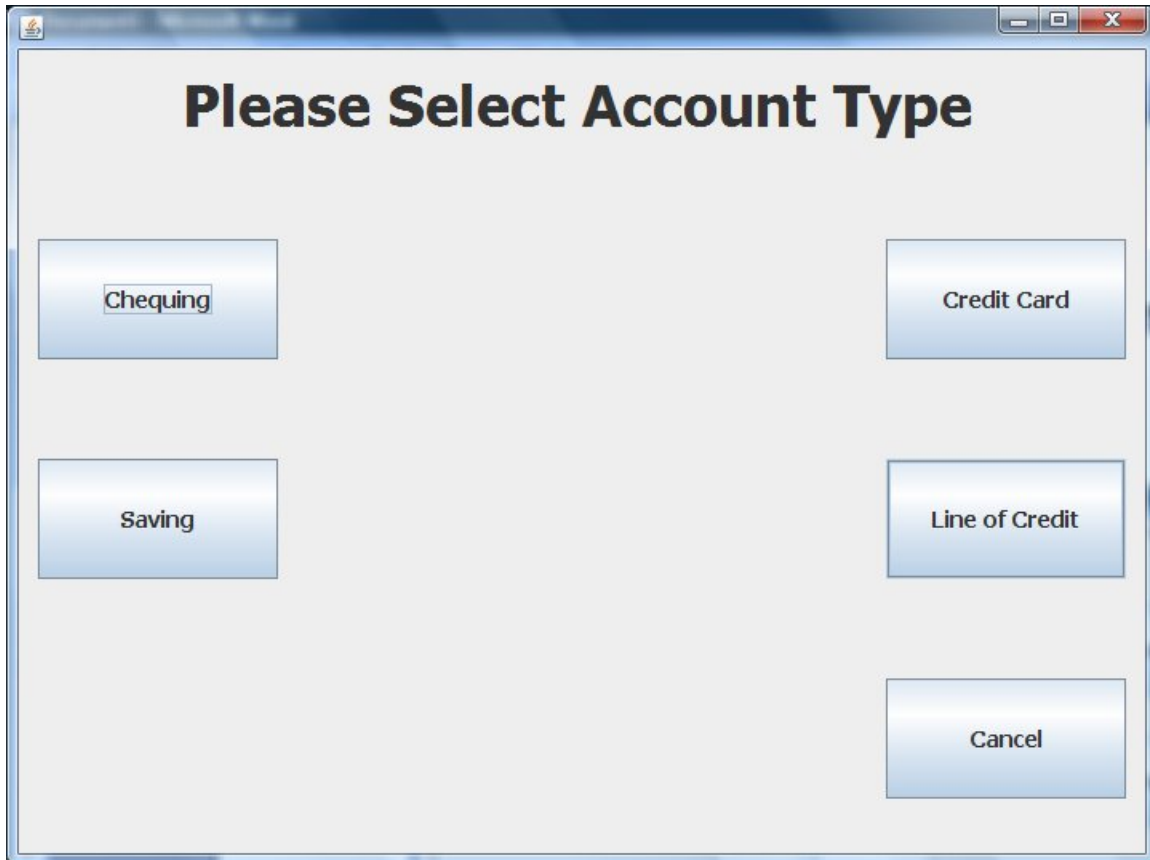


Figure 3: Interface outlining different Banking Accounts.

2.3 List of Activities

This screen provides the user with interactive buttons to select a banking activity of interest as seen in Figure 4. These include withdrawal of cash, deposit of money or cheques, transfer of money to different accounts and payment of bills. In addition, it features a **“Back”** button allowing the user to return to the previous screen and the **“Cancel”** button which cancels the entire banking interaction. The View Accounts provides the user with an account summary of the different banking accounts activated by the bank.

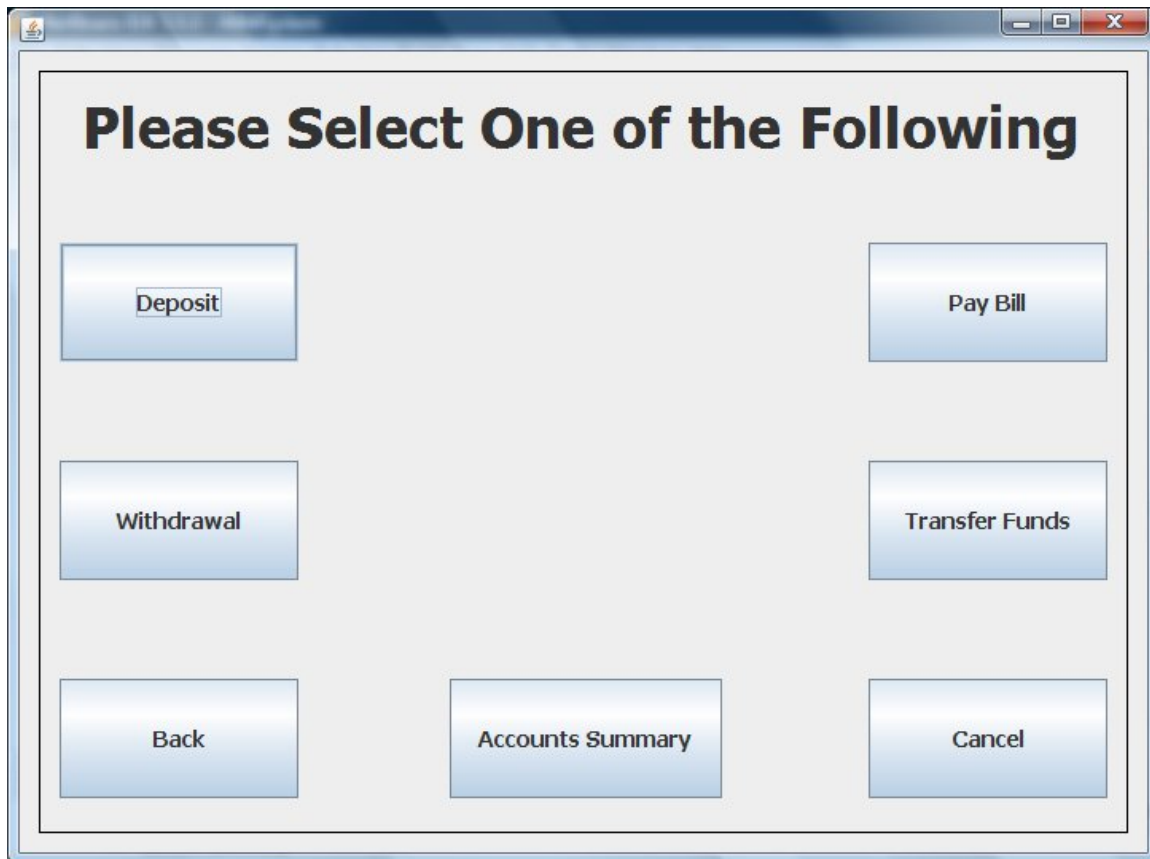


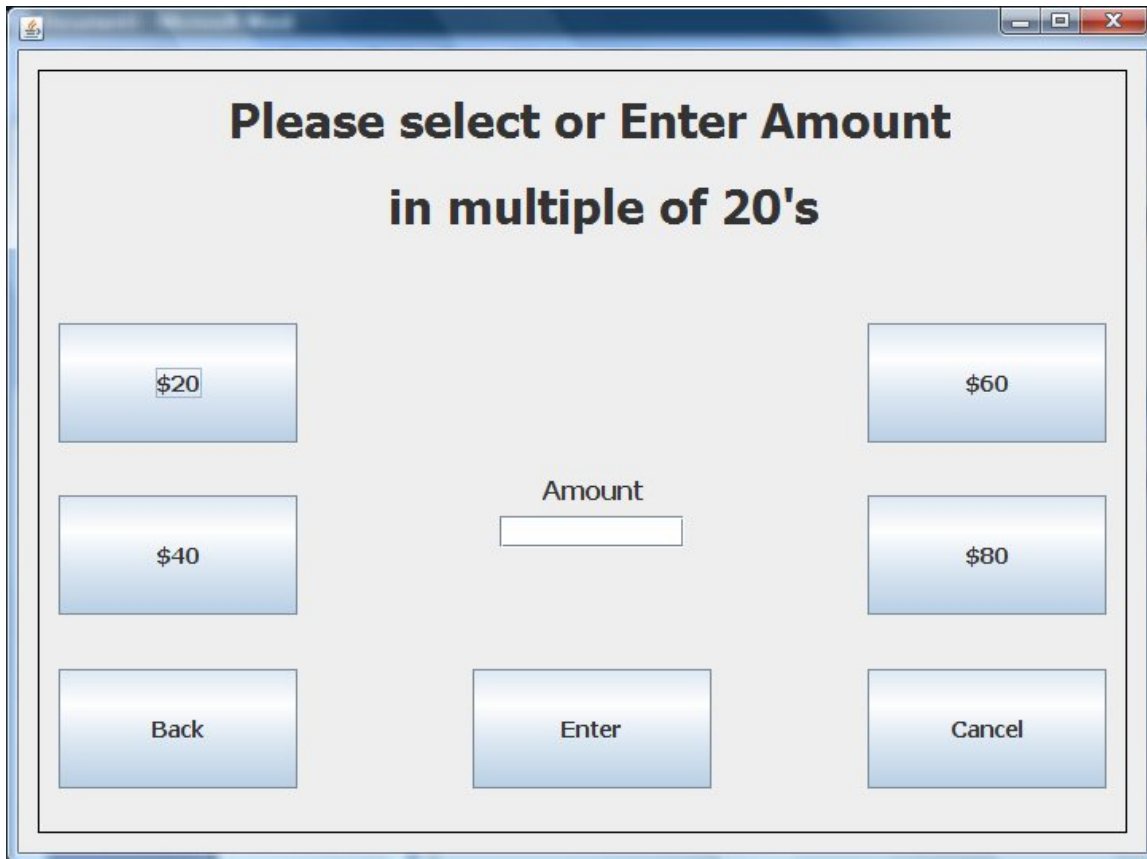
Figure 4: List of banking activities available for user accounts.

Depending on the selection of the user, the program proceeds to one of the following GUI's listed below:-

1. Deposit Interface used to deposit cash or a cheque the account.
2. Withdrawal Interface used to obtain amount of cash from the activated account.
3. Pay Bill Interface used to make outstanding payments to a selected number of firms.
4. Transfer of Funds Interface used to transfer funds between the different user's accounts.
5. Account Summary Interface used to view account information.

2.3.1 Withdrawal Interface:

This screen appears when the user selects the option to withdraw cash from the ABM machine. The user can either select a predetermined amount by clicking on the quick buttons that appear on the screen or enters a desired amount which is a multiple of the \$20 bill as seen in Figure 5. If the user enters an amount which is not a multiple of \$20, the software provides the user with an error message prompting the user to try again. As discussed above, the “**Back**” button navigates the user to the previous interface and the “**Cancel**” button to end the banking transaction.



The screenshot displays a software window for the withdrawal interface. The window has a title bar with standard minimize, maximize, and close buttons. The main content area has a light gray background and is enclosed in a double-line border. At the top, the text "Please select or Enter Amount" is centered in a large, bold, black font, with "in multiple of 20's" centered below it in a slightly smaller bold font. Below the text, there are seven blue rectangular buttons with white text. On the left side, there are three buttons stacked vertically: "\$20", "\$40", and "Back". On the right side, there are three buttons stacked vertically: "\$60", "\$80", and "Cancel". In the center of the window, there is a label "Amount" above a small white rectangular input field. Below the input field is a single "Enter" button. All buttons have a slight gradient and a thin black border.

Figure 5: The Withdrawal Interface.

2.3.2 Deposit Interface:

As seen in Figure 6, this screen appears when the user selects the option to deposit cash or a cheque into an account. The user is prompted to enter the amount in Canadian dollars that will be enclosed in the envelope. The Enter button processes the request and navigates the user to the next screen. As discussed above, the “**Back**” button navigates the user to the previous interface and the “**Cancel**” button ends the banking transaction.

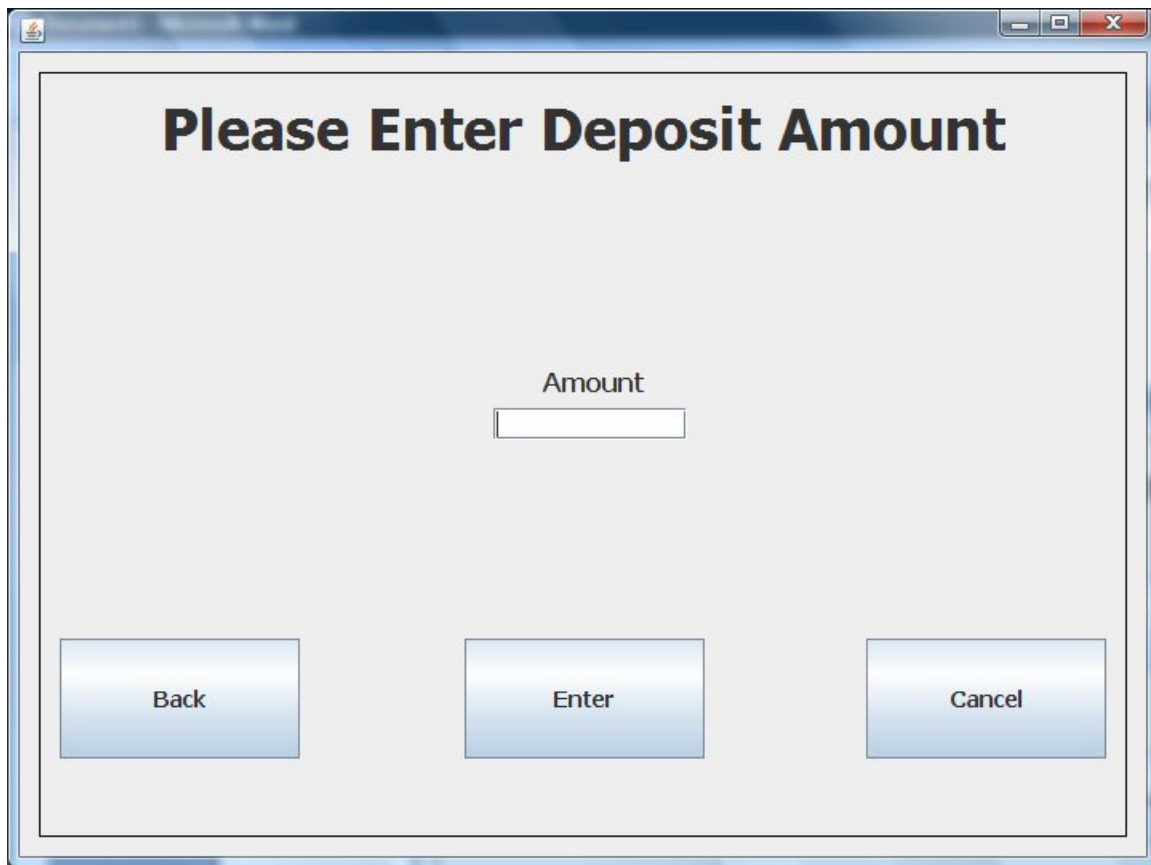
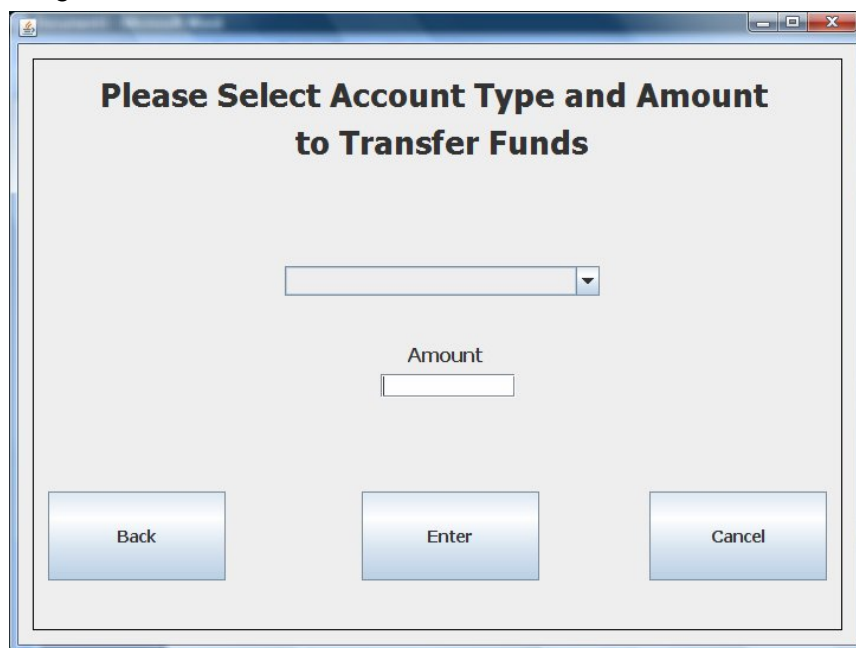
The image shows a software window titled "Please Enter Deposit Amount". Inside the window, the text "Please Enter Deposit Amount" is displayed in a large, bold, black font at the top. Below this text, the word "Amount" is centered above a single-line text input field. At the bottom of the window, there are three rectangular buttons with a light blue gradient and black text, arranged horizontally. From left to right, the buttons are labeled "Back", "Enter", and "Cancel". The window has a standard Windows-style title bar with minimize, maximize, and close buttons in the top right corner.

Figure 6: The Deposit Interface.

2.3.3 The Transfer Funds:

This screen appears when the user selects the option to transfer funds. The user can select an account from a drop down menu. The user will be prompted to enter the amount of funds to be transferred. The Enter button processes the request and navigates the user to the next screen. The **“Back”** button navigates the user to the previous interface and the **“Cancel”** button to cancel the banking transaction.

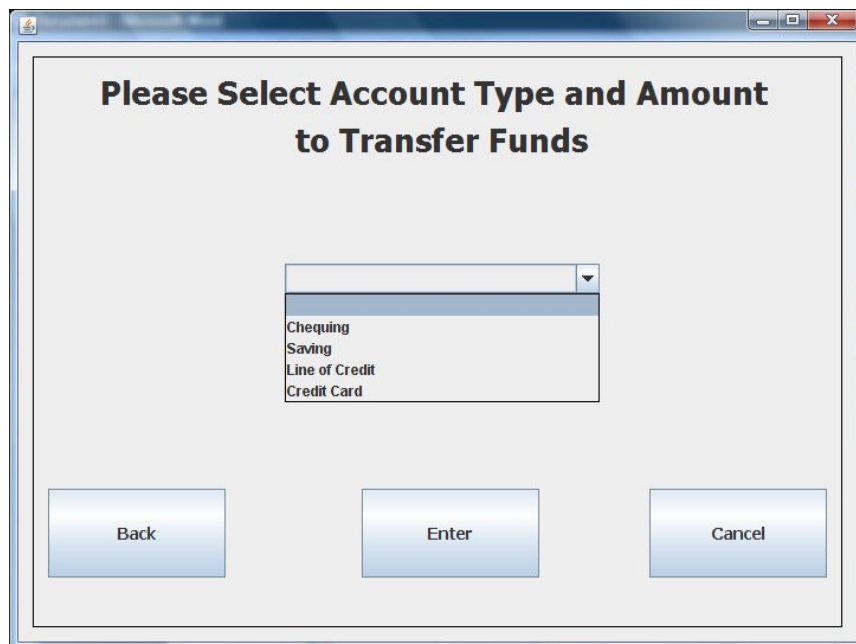


Please Select Account Type and Amount to Transfer Funds

Account Type: [Dropdown Menu]

Amount: [Text Input Field]

Buttons: Back, Enter, Cancel



Please Select Account Type and Amount to Transfer Funds

Account Type: [Dropdown Menu]

- Chequing
- Saving
- Line of Credit
- Credit Card

Buttons: Back, Enter, Cancel

Figure 7: The Transfer Funds Interfaces.

2.3.4 Paying Bills:

This screen as seen in Figure 8 appears when the user selects the option to pay bills. It prompts the user to select a company from a drop down menu to which a payment will be made. The user also enters the amount on the bill. The Enter button processes the request and navigates the user to the next screen. The “**Back**” button navigates the user to the previous interface and the “**Cancel**” button to cancel the banking transaction.

The figure consists of two screenshots of a software interface titled "Please Select From List and Enter Amount to Pay Bill".

The top screenshot shows the initial state of the interface. It features a large, empty dropdown menu in the center. Below the dropdown menu is a text input field labeled "Amount". At the bottom of the interface, there are three buttons: "Back", "Enter", and "Cancel".

The bottom screenshot shows the same interface, but the dropdown menu is open, displaying a list of companies. The list includes: McMaster University, Cogeco Inc., Horizon Utilities, Bell Canada, Telus Mobility, Hamilton Hydro Inc., and Economical Insurance. The "Amount" input field and the "Back", "Enter", and "Cancel" buttons remain visible at the bottom.

Figure 8: The Paying Bills Interface.

2.3.5 Account Summary:

As seen in Figure 6, this screen appears when the user selects the option to deposit cash or a cheque into an account. The user is prompted to enter the amount in Canadian dollars that will be enclosed in the envelope. The Enter button processes the request and navigates the user to the next screen. As discussed above, the “**Back**” button navigates the user to the previous interface and the “**Cancel**” button ends the banking transaction.

The screenshot displays a software window titled "Account Information". Inside the window, there are three distinct sections, each representing an account summary. Each section contains labels for "Card Number", "Account Number", "Account Type", and "Account Balance", followed by a corresponding text input field. At the bottom of the window, there are two large, light-blue buttons: "Done" on the left and "Cancel" on the right.

Card Number	Account Number	Account Type	Account Balance
12345678	123456789012	Chequing	1500 10
	345678901234	Line of Credit	0
	234567890123	Saving	300
	456789012345	Credit Card	0

Figure 9: The Account Summary Interface.

3 User Interfaces for Bank Manager

The following screen appears once the bank manager enters the PIN. The screen allows the manager to perform various operations with regard to a particular banking account.

Some of the operations that the manager can perform are:-

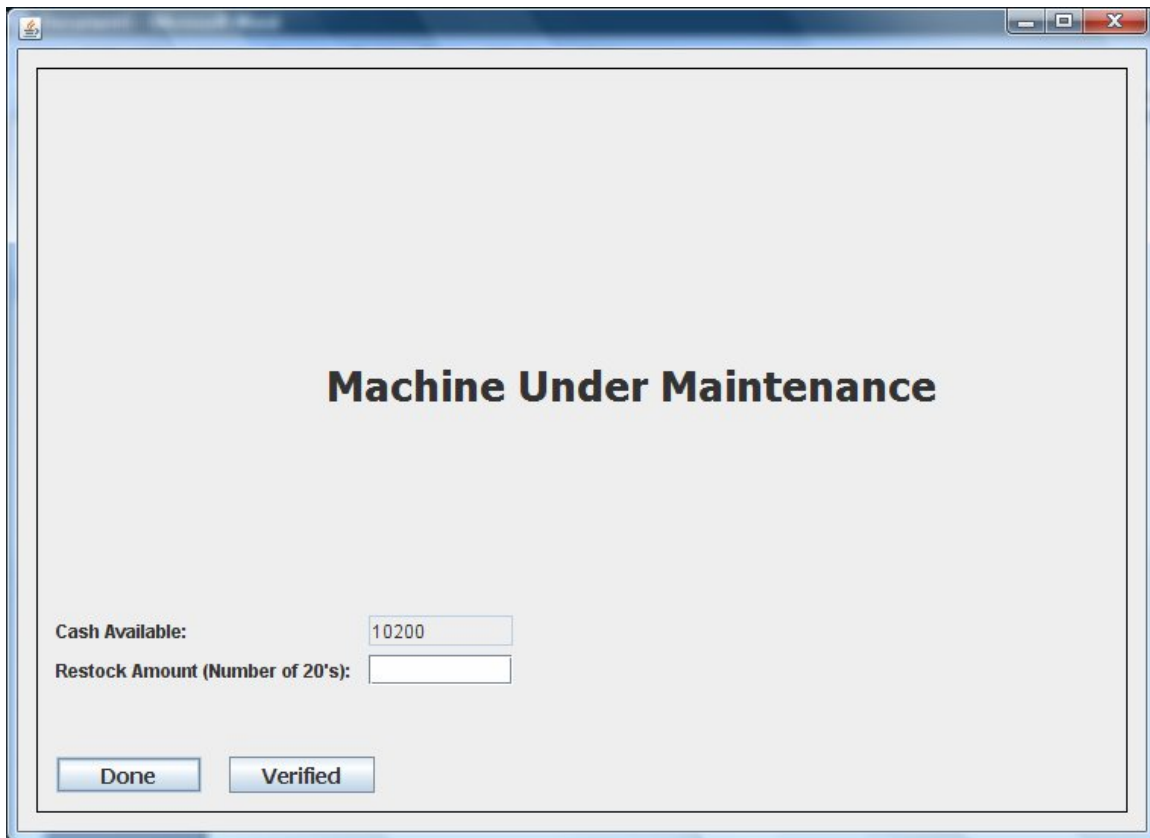
1. Unblock an Account - The card number must be entered and the **“UnBlock Account”** Button must be clicked.
2. Block an Account - The card number must be entered and the **“Block Account”** Button must be clicked.
3. Delete the customer's main Account - The card number must be entered and the **“Delete Main Account”** Button must be clicked.
4. Delete a Type of user Account - It can be in the form of a Chequing, Saving, Line of Credit and Credit Card and the card number must be entered.
5. The manager can also change the PIN of the customer by entering the card number and the new PIN in the appropriate field.



Figure 10: The Manager's Setup Interface.

4 User Interfaces for Staff Operations

The following screen appears once the operator enters the PIN and uses the key on the Welcome Screen. The screen displays information about the cash available in the machine. It also has a field where the operator can enter the amount of money that will be restocked into the machine to bring the cash available total to greater than \$10,000. The operator has the “**Verified**” button to verify the cash or cheques deposited into the ABM machine.



The screenshot shows a software window titled "Machine Under Maintenance". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. The main content area is light gray and contains the following elements:

- A large, bold, black heading "Machine Under Maintenance" centered in the upper half of the window.
- Below the heading, on the left side, the text "Cash Available:" followed by a text input field containing the value "10200".
- Below that, the text "Restock Amount (Number of 20's):" followed by an empty text input field.
- At the bottom left of the window, there are two buttons: "Done" and "Verified".

Figure 11: The Operator's Interface.