ATM Simulator Manual

# User Guide

## How to Setup

1. Download ATMSimulator.zip or go to: <https://github.com/SkyFloyd2004/ATMSimulator> and download ATMSimulator folder on GitHub and skip step 2
2. Extract ATMSimulator.zip
3. Open the new ATMSimulator folder
4. Open the Setup folder
5. Open the Debug folder
6. Run setup.exe
7. The ATMSimulator Setup Wizard will open

A screenshot of a computer program

Description automatically generated

1. Click Next
2. Select desired path to download ATM Simulator and if ATM Simulator will be available to just current user or all users

A screenshot of a computer

Description automatically generated

1. Click Next
2. Click Next
3. Click Close
4. There will be a desktop shortcut to ATM Simulator after clicking Close.
5. ATM Simulator is fully set up and able to be ran.

## How to Use

1. When starting ATM Simulator, the user will be greeted with the Login window. A screenshot of a computer screen

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2. Here the user must enter a card number and the pin linked to that card.

|  |  |
| --- | --- |
| Useable Cards and PINs | |
| Card Number | PIN |
| 0001000200031111 | 1123 |
| 0001000200031234 | 1929 |
| 0001000200032232 | 4444 |
| 0001000200034321 | 6578 |
| 0001000200037777 | 5566 |

A screenshot of a computer screen

Description automatically generated

1. From there a “Two-Step Authentication” window will open (The code will always be 1111). A screenshot of a computer

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2. Once the proper Card Number, PIN, and Two-Step Authentication the ATM Menu window will open.
3. The ATM Menu has four tabs within it, the first tab it opens to is the Available Cash tab which displays the active cards cash amount associated with the card. A screen shot of a blue screen

   Description automatically generated
4. Next the user can select from the four tabs, the other three tabs are labeled Recent Transactions, Withdrawal and Exit.
5. The Recent Transactions tab show the cards transaction history of the five most recent transactions.

A screenshot of a computer screen

Description automatically generated

1. The Withdrawal tab has a text entry box and a Withdrawal button, in the text entry box the user must enter a withdrawal amount.

A screenshot of a computer screen

Description automatically generated

1. Once a withdrawal amount has been entered, the user must press the Withdrawal button.
2. Finally, a message box will appear that shows the new cash balance of the card, and the amount withdrew. Also, the Transaction History and Available Cash will be updated.

A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA blue background with white text

Description automatically generated

1. To exit ATM Menu, go to the fourth tab named Exit and click the Exit button. The user will be taken back to the login page and there will be an Exit button to close the application all together. A screenshot of a computer

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# Technical Documentation

## Database

Here are the three database tables used to make the application work. Microsoft SQL Server database is used.

|  |  |
| --- | --- |
| Accounts | |
| AccountID  (int) | MobileNumber  (nchar(12)) |
| 1 | 001-123-3211 |
| 2 | 002-234-4322 |
| 3 | 003-345-5433 |
| 4 | 004-456-6544 |

|  |  |  |  |
| --- | --- | --- | --- |
| Cards | | | |
| CardNumber  (nchar(16)) | PIN  (nchar(4)) | AvailableCash  (decimal) | AccountID  (int) |
| 0001000200031111 | 1123 | 153.71 | 2 |
| 0001000200031234 | 1929 | 39031.74 | 1 |
| 0001000200032232 | 4444 | 696.87 | 3 |
| 0001000200034321 | 6578 | 543.34 | 1 |
| 0001000200037777 | 5566 | 3522.28 | 4 |

AvailableCash is subject to change when using the application. AvailableCash changes after every withdrawal.

|  |  |  |  |
| --- | --- | --- | --- |
| TransactionHistory | | | |
| TransactionHistoryID  (int) | Transaction  (decimal) | Date  (DateTime) | CardNumber  (nchar(16)) |
| 7 | 235.23 | 1/12/2024 12:00:00 AM | 0001000200031111 |
| 8 | 23.54 | 1/23/2024 12:00:00 AM | 0001000200031111 |
| 9 | 76.34 | 1/24/2024 1:53:12 PM | 0001000200031111 |
| 10 | 435.22 | 12/23/2023 12:00:00 AM | 0001000200031234 |
| Continued… | | | |

TransactionHistory is a constantly updating with every withdrawal. Whenever a withdrawal happens there is a new transaction inserted into the TransactionHistory table.

## Class

A public class named TransactionHistory was made to help logging entries into TransactionHistory. There are two constructors, one empty and one with 3 parameters. The empty constructor doesn’t have anything within it, it is so that a blank TransactionHistory object can be created. The constructor with 3 parameters has the parameters of decimal transaction, DateTime date, and string cardNum. The query is used to create multiple TransactionHistory objects, which are then put into a list to later be displayed in a list box.

## Installer

Microsoft Visual Studio Installer Projects 2022 was used to create an installer for ATM Simulator. Using this made it possible to create a Setup.exe, which when ran will create an ATMSimulator.exe allowing the user to interface with the application without having to open Visual Studio.