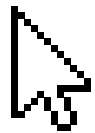
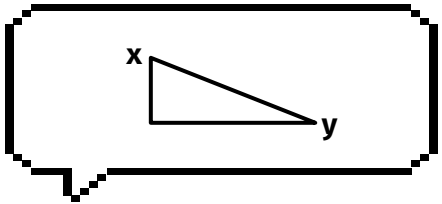
ATM SYSTEM INTERFACE

Project

COMPSCI-2-39452



Created by: Andrew Guerra and Joshua Jaime
05/12/2025



01

Introduction

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Andrew Guerra

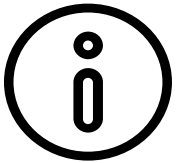
I am a computer engineering major. I am currently at my first year of chaffey college and plan to transfer to either Cal State Fullerton or Cal State San Bernardino. Computers have always fascinated me so I’m looking forward to learn computer architecture, Machine learning models and circuits.

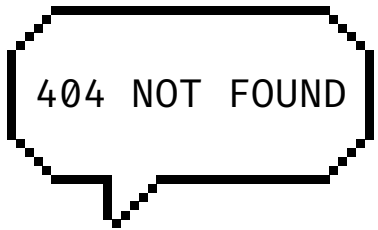
Our Inspiration

Our inspiration is from atm systems that allow the user to deposit and withdraw money from their accounts without human interaction. We also took inspiration from bank apps that allow the user to create their own username and password which provides better security of their information. Our goal is to have a system that is relatable and easy to use.

Joshua Jaime

I am currently at my 2nd year of chaffey college and on track to transferring to a Cal state university. My major is computer science and I wish to become a video game developer or a software engineer. The reason why I chose those two careers is because I feel like they are both interesting and important to me. I've always wanted to create a game or software that can be enjoyed by others and help spread happiness and bring good to the world!





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Project Implementation

Project Implementation

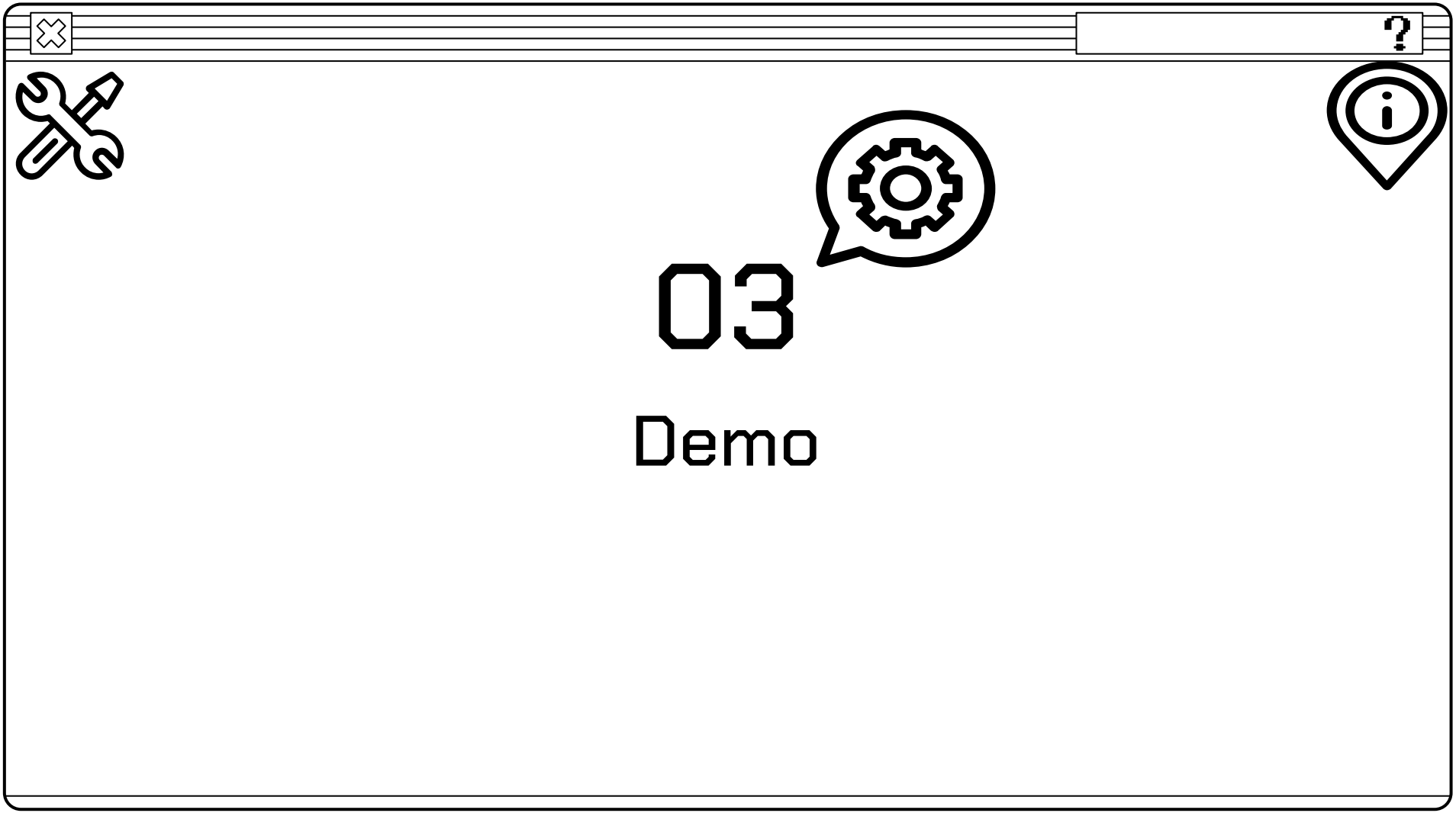
Our project simulates a banking system with support for:

- Multiple users
- Account types: Checking,Savings, and credit
- Password-Protected accounts
- Core operations like being able to deposit, withdraw,etc

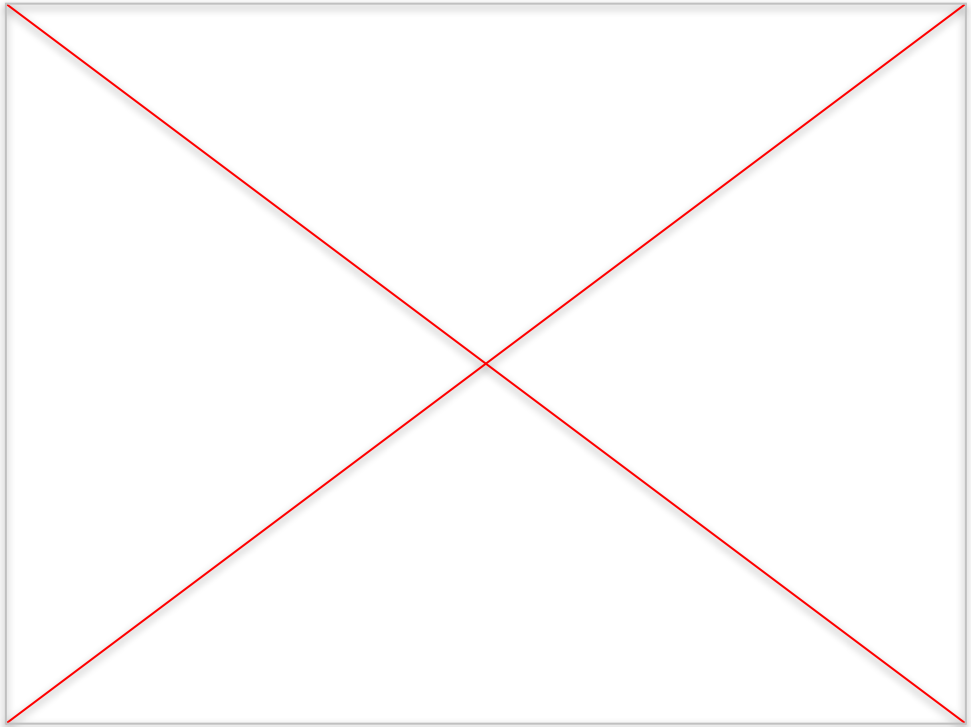
Our Bank Account system uses a class that can show the balances of all accounts and uses credit limit logic.
Our User Class represents a bank user with

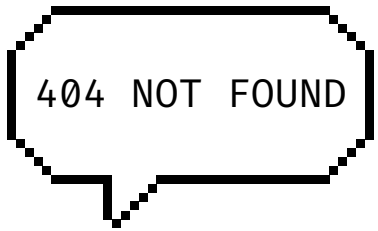
- A username
- A password
- All with 3 different accounts (checking, savings, and credit)

- **Classes and inheritance**
  - Class BankAccount
    - Checking inherits BankAccount
    - Savings inherits BankAccount
    - Credit inherits BankAccount
  - Class User
  - Class Bank
- **Constructors/destructors** are used to initialize useraccounts and bankaccount functions
- **Vectors** are used to manage users
- **Pointers** are used in User class to track a specific user in the vector
- **Polymorphism**: The deposit() and withdraw() functions are overridden in derived classes for specific behavior.


03
Demo

Demo





04

Future Work/Conclusion

Future Work/Conclusion

The way we implemented our project was first brainstorming ideas, for example we originally were going to make a game but then Andrew thought of making a ATM that would store accounts for users, We both thought that was a good idea so we went with that and gave each other task on who did what. Andrew Guerra started with the bank accounts (savings checking credit) and Joshua Jaime started with creating the users and making the Bank Class with a little bit of help from Andrew Guerra. We had some ups and downs like trying to figure out how to create the make the user Authenticator, but overall we did a good job as a team of 2.

From this project we believe that it will help us with future projects because it gave us both a challenge and a reason to why we want to be involved in computers. The idea of this project was to show our capabilities of what we have known so far and how we can further improve on it in the future. This ATM project is something to look back on because it represents a foundational milestone in object oriented programming and system design. This project should show you that we can think like a developer.