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Computer Science 1412 Section 502

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Semester Project

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| --- | --- | --- | --- |
| Primitive Types | | | |
| INT | i,o (counters) | w,c (Loop Controllers) | MenuSelect (User Input) |
| Char | **STRINGS:** user, pass, a\_user, a\_pass (Place holders for User Input ) | | |
| Misc | \*Note Some of the files have their own counters and loop controllers | | |

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| --- | --- | --- | --- | --- |
| Structure Name: Accounts | | | | |
| char | First Name | | Last Name | City |
| char | State | Phone | | ID |
| char | Pass |  | |  |
| double | Balance |  | |  |

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| --- | --- |
| Files (Proto-types) | |
| Banksystem.c | The “Main.c” of this project where everything is called |
| Customer.c | The functions that have to do with Customer are here and also the structure is declared here |
| Customer.h | Header file for Customer .c |
| Admin.h | Header file for Admin.c |
| Admin.c | The functions that have to do with administrator menu are here. |
| CustomerData.txt | File to |
| \*Note that all of the functions inside this file will be displayed at the end of the PseudoCode | |

File to Structure

-Define Primitive Types, Strings, and Structures

-Open File

-Make a For loop to check how many accounts there are in the file before end of file

-Close File

-ReOpen File and File Scan the text to Structures Close File

Login

-Print out Login

- User Validate Login use String comparison to check if Username and Password Correct

-Decide wether they should go to the Admin Menu or to the Customer Menu

Admin Menu

-While loop the following so the menu will keep refreshing until User decides to logout

-Print out Menu

-Use Cases to Validate Input

-Plug in each Function for each case **\*Functions explained below**

-Make sure “Exit” actually exits the loop

-Use Clear Screen Function to make the Experience Cleaner

Customer Menu

-While loop the following so the menu will keep refreshing until User decides to logout

-Print out Menu

-Use Cases to Validate Input

-Plug in each Function for each case **\*Functions explained below**

-Make sure “Exit” actually exits the loop

-Use Clear Screen Function to make the Experience Cleaner

Functions: In Bank System .c

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| --- | --- | --- |
| Main | | In Banksystem.c |
| Input | Void | |
| Output | Integer- Just to make sure the program exits correctly | |
| Side Effects | Rest of Functions Run from here | |
| Notes | Main Function is the most important | |

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| Clear Screen | | In Banksystem.c |
| Input | Void | |
| Output | Void | |
| Side Effects | Clears the Screen after a Input Stream Clear and a prompt to continue | |
| Notes | This functions was just made to make the program cleaner | |

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| Print | | In Banksystem.c |
| Input | A structure and Number of Accounts in the Structure | |
| Output | Void | |
| Side Effects | Prints the Structure | |
| Notes | Was mainly used for testing but we incorporated it into some of the other functions. | |

Functions: In Customer .c

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| --- | --- | --- |
| Change Pass | | In Customer.c |
| Input | Character Array with Current Password | |
| Output | Void | |
| Side Effects | Changes Inputted Character Array | |
| Notes | User Input Validated! | |

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| --- | --- | --- |
| View Info | | In Customer.c |
| Input | Current User Structure | |
| Output | void | |
| Side Effects | Prints All the public information to the screen | |
| Notes |  | |

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| View Balance | | In Customer.c |
| Input | Pointer to current account’s struct | |
| Output | Void | |
| Side Effects | Prints Balance for User to See | |
| Notes |  | |

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| --- | --- | --- |
| Deposit | | In Customer.c |
| Input | Pointer to the balance for that account | |
| Output | Void | |
| Side Effects | Adds the Money wanted to the account | |
| Notes | User Validated! | |

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| --- | --- | --- |
| Withdraw | | In Customer.c |
| Input | Pointer to the balance for that account | |
| Output | Void | |
| Side Effects | Subtracts the Money wanted from the account | |
| Notes | User Validated | |

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| --- | --- | --- |
| Transfer | | In Customer.c |
| Input | The Whole Structure, Number of accounts, Identifier for original account | |
| Output | Void | |
| Side Effects | Subtracts from original accounts and adds to account entered | |
| Notes | User Validated every step of the way. | |

Functions:In Administrator .c

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| Create Account | | In Administrator.c |
| Input | Structure and Integer to say which space to add it to | |
| Output | void | |
| Side Effects | Adds an account to the structure at the end of the structure | |
| Notes | User Validate each of the steps. | |

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| View Account | | In Administrator.c |
| Input | Structure and #of accounts | |
| Output | void | |
| Side Effects | Prints all of the accounts in the Structure | |
| Notes |  | |

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| --- | --- | --- |
| Delete Account | | In Administrator.c |
| Input | Structure and a pointer to the total number of accounts integer | |
| Output | void | |
| Side Effects | Deletes an account | |
| Notes | User Validated! | |

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| Top 5 | | In Administrator.c |
| Input | Structure and Number of Accounts in Structure | |
| Output | void | |
| Side Effects | Prints the Top 5 Balances in the Structure | |
| Notes |  | |

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| --- | --- | --- |
| View Names | | In Administrator.c |
| Input | Structure and Number of Accounts in the Structure | |
| Output | void | |
| Side Effects | Asks User of a letter and Prints last names alphabetically | |
| Notes |  | |

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| --- | --- | --- |
| Change Info | | In Administrator.c |
| Input |  | |
| Output | void | |
| Side Effects |  | |
| Notes |  | |

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| --- | --- | --- |
| Change Pass | | In Administrator.c |
| Input | Pointer to an Array with Original Password | |
| Output | void | |
| Side Effects | Changes Password for Admin | |
| Notes | Same Function as for Customer Menu (User Validated) | |