Program Requirements Document

CIS 022 Wednesday, February 7th, 2024

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| **Application/ Program name:** | ATM Withdrawal Software Biller |
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| **Purpose or problem definition:** |
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| This program will prompt the user to insert the card from the bank, it will then retrieve the user’s balance, if the balance is negative or zero the program will display the prompt “No funds available”. If the user has the funds available, the program will continue to run. The program will display the 4% and $25 fee if certain conditions are met, then prompt the user to input an amount of withdrawal less than $500. The program will calculate the user’s withdrawal cost, service fees (if applicable), and their balance after the withdrawal, these values will be displayed to the user. The user will be given the final prompt of verification of the transaction. |

| **Program Procedures:** |
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| 1. Display prompt- “Insert Banking Card” 2. Retrieves balance of the user. 3. If balance is negative or zero program will close and display the prompt “No funds available” 4. Display prompt - “Any amount requested greater than $300 will be 4% service charge, if the amount requested is greater than your balance then a $25 service fee will be charged. If both apply then you will pay the 4% service charge plus the $25 service fee.” 5. Display prompt - “What amount under $500 do you wish to withdraw?” 6. Calculate the cost of the 4% service fee if applicable 7. Calculate the cost of the withdrawal in total 8. Calculate the balance after subtracting the total withdrawal value 9. Calculate Balance after withdrawal 10. Display Balance after withdrawal 11. Display prompt - “Do you wish to finish the transaction?” 12. Exit the program if user decides to finish the transaction. |

| **Algorithm/Processing/Conditions:** |
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| **Inputs:** |
| 1. User’s balance 2. Withdrawal amount |
| **Processes:** |
| 1. Calculate first if the user has any funds in their account. If the amount is 0 or negative the program will close. 2. Take the user's balance and set it to a variable. 3. Take the user’s withdrawal amount and set it to a variable. A loop will be set here in case the user enters a quantity greater than 500, the loop will prompt the user again till the quantity is valid. 4. The withdrawal amount of the user would go through multiple “if” statements to apply the conditional fees. 5. If withdrawal variable is equal to or greater than 300 then multiply the variable by 1.04 6. If the withdrawal variable is greater than the current balance, add 25 to the withdrawal variable. 7. The resulting variable would be the balance variable minus the withdrawal variable. |
| **Outputs:** |
| 1. Display the value of the user’s balance after subtracting the withdrawal amount plus fees. |
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| **Notes & Restriction:** |
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| It is assumed that the ATM cannot dispense more than $500. It is also assumed that the user has already entered their bank information and they are in the UI. |

| **Comments:** |
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| Error handling includes:   * If user’s bank balance is $0 or less, the ATM will not dispense any money and the transaction will end. * If user enters a withdrawal amount greater than $500, the ATM will prompt the user to enter a different quantity that is $500 or less. |