**Requirements Document**

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**Usability:**

* The Customer shall have access to ATM interface, paper deposits, and/or use of credit cards to make withdrawals and deposits
* Tellers shall have access account balances, recent debits, accounts status (current or behind). Loan, withdrawal, deposit, and other account operations. Tellers can credit any account they have access to and transfer money between them.
* Managers shall have access to all the same systems and functions as Tellers, in addition to setting up and managing Loans and CDs, including interest rates on payments. They shall send bills each month out to credit and mortgage accounts. They shall also process rollover notices for CDs and set the interest rates paid monthly on checking and savings accounts.

1. **Interface Functionalities:**
   1. **Checking and Saving Account Interfaces:**
      1. The Interfaces shall allow tellers to credit money from accounts.
      2. The Interfaces shall allow tellers to debit money from accounts.
      3. The Interfaces shall allow tellers to open checking accounts.
      4. The Interfaces shall allow tellers to open saving accounts.
      5. The interface shall allow customers to enter a payment amount to balance their credit card account.(payments)
      6. The Interface shall have a “Yes/No” buttons on all warning prompts.
      7. The interface shall allow prompt tellers to ask users to pay their credit bill if it is the 7th, 8th, or 9th if it has not been paid.
   2. **ATM interfaces:**
      1. The Interfaces shall allow customers, tellers, and managers to issue atm cards.
      2. The Interface shall allow customers to choose from savings or credit accounts.
      3. The Interface shall allow customers to input withdrawal amount.
      4. The Interface shall reset every 24 hours.
      5. The interface shall allow prompt users to pay their credit bill if it is the 7th, 8th, or 9th if it has not been paid.
   3. **Employee Interfaces:**
      1. The interface shall allow Tellers to pull up all related records of a customer.
      2. The interface shall allow Managers to close accounts on request from customer.
      3. The Interface shall allow Managers to make short term or long term loans, as well as set interest rates for each loan
      4. The Interface shall allow Tellers and Managers to assign credit and ATM cards.
      5. The Interface shall have a set of buttons to switch between each account of a customer.
      6. The Interface shall allow Tellers to transfer money amongst accounts.
      7. The Interface shall allow Managers to run reports for credit cards and CD accounts.
      8. The Interface shall allow employees to pull up records of all of a customer's transactions
2. **System Functionality:**
   * 1. The System shall be web based
     2. The System shall maintain a record of ALL transactions.
     3. The System shall be only available on company intranet users
     4. The System shall allow for loans to be taken out at on 5, 15 or 30 year plans.
        + 1. If a loan payment is missed the customer is labeled a problem account.
     5. The Systems shall have an automated system to alert users of when their funds are to low. This is tied to the overdraw accounts, and the Gold/Diamond accounts. The alert amounts are $50 and $1000, respectively.
     6. The System shall send an alert if a credit card purchase of over $1000 is made.
     7. The System shall allow for an auto-pay system on loans and credit card debt.
     8. The System shall auto compound interest on savings and loans.
        + 1. Standard Savings have a daily compound rate
          2. CDs have a fixed rate of return established by management at creation of the CD
          3. Gold/Diamond have a daily interest rate on all checking and savings accounts of 0.5 x (the rate on the day the account was established)
          4. The System shall be able to impose various charges such as:
     9. The System shall bill 50 cents per small withdrawals and deposits on a “That’s my Bank” account, and 75 cents for each automatic debt pay (mortgages, loans, etc.)
     10. The System shall bill no cents per any transaction on a “Gold/Diamond” account.
     11. The System shall assign a late fee of $75 on all missed loan payments.
     12. The System shall assign a fee of $20 on all overdrafted accounts without backup savings set up.
     13. The System shall debit savings accounts for amount overdrafted if that account is setup as a backup account with no fee.
     14. The System shall allow a manager to run reports on a CD or credit card account.
     15. The System shall allow a manager to set interest on checking and savings accounts.
     16. The System shall allow for termination of transactions based on “check number”
     17. The System shall allow a user to cancel a transaction at any time; there is a $15 stop payment fee.
3. **Screen Functionality:**
   * 1. The Screen shall display a login screen
        + 1. ATM shall ask for PIN
          2. Teller workstation shall ask for Employee ID and password
     2. The Screen shall display a list of accounts.
     3. The Screen shall allow Management to look at the status of user accounts.
     4. The Screen shall display recent transactions debited to each credit card account.
     5. The Screen shall have an error display for withdrawing more than twice in one day.
     6. The Screen shall have an error display if the user inputs the wrong PIN.
     7. The Screen shall have a display stating change of status for checking accounts.
     8. The Screen shall have a display showing account details such as balance, etc.
     9. The screen shall display a “Are You sure prompt?” on all termination transactions.
     10. The Screen shall display a warning if a withdrawal (ATM) or credit payment (manager) will go over the funds/credit limit of the account in question.

**Functions:**

* Customer - CustomerID(social security no) , Name (First, Last), address(Street, No., City, State, ZIP) ,, linked account numbers
* Managers - ID, Name (First, Last), Payrate, permissions
* Tellers - ID,Name (First, Last), Payrate
* Checking - account no, date opened, CustomerID,account type, current balance, BackupAccounts, Overdrafts for the month, amount, status, ATM card no; Polymorphic
* Savings -AccountNo, CustomerID, currentBalance, InterestRate, Date Opened, CDs; Polymorphic
* Loan - Customer name,current balance, interest rate, monthly due date, date to notify customer, Current Payment due, Time since last payment, missed payment flag (T/F)maturity date, Short term/long term distinction
* CD - Amount, maturity date, status, Fixed rate (does not use outside interest function), expiration date,
* ATM card - CustomerID, PIN, date expiring, account number, record of times used in day
* Credit card - CustomerID, account number, card number, expiration date, credit limit, current balance,recent transactions, date due
* Overdraft - function that checks off if client spends more than in checking account class, and whether they have a back-up account
* BackupAccounts- boolean that works with Overdraft class to see if customer has Plan B
* “Gold Termination” - boolean that goes off if account dips below $1000; determines account type for checking class
* “TMB” - Boolean that makes a system charge interest on transactions
* Daily Interest - variable/table that controls interest calculation for accounts; works with Deposit and Withdrawal
* Deposit - function of Checking and Savings account that allows for adding of funds
* Withdrawal - function of Checking and Savings account that allows for subtraction of funds
* StopPayment-termination class, applies $15 fee
* MissedLoanPayment - Checks to see if payment is late and flags/charges account fee.
* CreateAccount - function that allows entry of customer
* TerminateAccount - drops customer and related accounts
* CreditLimitCheck - function that checks, upon purchase, the amount spent vs. credit left on account
* TestHarness -allows managers to run hypotheticals