BANKING SYSTEM

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XYZ Bank

- XYZ Bank decided to computerize its facilities in their bank to implement customer records and their daily transaction records. The bank keeps certain information as follows:
- Initial.dat:

    acct_no: Account Number

    name: Name of the Accountee

    address: Address of the accountee

    balance: Initial balance of the account

- When any customer will open an account, the bank will keep the above fields in their INITIAL.dat file as mater account holder.
- Banking.dat

    acc_no: Account number

    type: Transaction type by cash / cheque

    dd, mm, yy: Date of transaction

    trans: Transaction for Deposit or Withdraw

    interest: Interest rate

    amount: Transaction amount

    balance: current balance after transaction

- While inputting the data record the following validation will be checked:

1. the account numbers are generated automatically
2. the name, address should not be blank
3. transaction date is the system date / current date
4 initial deposit for any account should not be less than Rs.500/-
5. daily transaction will be entered in words cash/cheque or ‘D’ for deposit and ‘W’ for withdrawal

- Write a menu driven program for marking a daily transaction process for the displaying the following menu options:
    1. Open New Account
    2. List of accounts
    3. See individual account
    4. Daily transaction
    5. Edit account
- In the edit account menu the following processing will occur:
    1. Modify Account
    2. Close Account
    3. Quit
- The following will be the report format:

Report – 1: Accounts List in Bank

Date: 03/06/2025

Account Number	Name	Address	Balance
1234	Mr. Arjun	3rd Cross, Gandhinagar, A Block, Bengaluru	12000
2345	Mrs. Ramya	12th A Main Road, Jayanagar, Bengaluru	22000
3456	Mr. Praveen	8th B Main Road, Rajajinagar, Bengaluru	14500
5678	Mrs. Rashmi	4th A Cross, Sahakarnagar	12345

Total Balance in Bank is: 60845

Report – 2:

Account Number: 1234 Mr.Arjun Date: 03/06/2025

Global Report of Account

Date	Particular	Deposit	Withdraw	Balance
12-04-2025	Initial	2000		2000
12-05-2025	Cash	12000		14000
25-05-2025	Cheque	4000		18000
03-06-2025	Cash		4000	12000

Total -> 18000 4000 12000

Report – 3:

Account Number: 1234 Mr.Arjun Date: 03/06/2025

Statement Month: 03/06/2025

Date	Particular	Deposit	Withdraw	Balance
12-04-2025	Initial	2000		2000
12-05-2025	Cash	12000		14000
25-05-2025	Cheque	4000		18000
03-06-2025	Cash		4000	12000

Total -> 18000 4000 12000

Using C Structure concepts and having number of different user defined functions develop this project as follows:

main_menu (.....)

This is the main screening menu, which will display your six different prompts having different activities. Each prompt is connected with different functions to perform its respective purposes. Out of all the options the last one produces another sub menu for modifying and deleting existing account information.

While handling the main menu you can press any selective number to perform the operation or press 0 (zero) to exit from the main menu. But it is also helpful in almost all menus that, you can press 0(zero) to exit from the respective menu.

edit_menu (.....)

This is one of the sub function which is connected from the main_menu () function to perform the modification and deletion operation on banking account data from INITIAL.dat and BANKING.dat data file.

The menus always perform the operation according to the account number (accno) except the “Open New Account” of main_menu () function because, the “Open New Account” form automatically creates the account number after a brief search to the existing account numbers. Basically, numbers are generating automatically, like 1, 2, 3 .....respectively.

add_to_file (....)

The function add_to_file is used to append new account details into the INITIAL.dat file. This function receives all the fields as parameter way from the new_account () function and adds it in the data file.

display_list()

This function is used to display all the account data on the screen. Which displays the accountno#, name, address and their respective balance amount in the bank. It also shows the total bank balance on the screen. All the records are extracted from INITIAL.dat data file.

delete_account()

This function is used for deleting the account details from INITIAL.dat data file. This is a copy method, which transfers all the records except deleted accno#, and on the same way the records are reversed from the TEMP.dat file to the original data file INITIAL.dat

update_balance ()

When any fresh transactions take place in any existing account either deposit (D) or withdrawal (W), then the respective balance has to be updated in the INITIAL.dat data file. When the transactions are complete the balance amount is overwritten in the data file. This technique occurs by locating the position in the data file only.

modify ()

When there is any modification that occurs to the accounts name and address or to the balance amount, then simultaneously it becomes modified in the INITIAL.dat data file through the modify_account() function. This process highly depends on the key field account number.

last_accno ()

When a new record has to append into the data file, it has to create an automatic accno#. This process happens when we know the last account number. To know the last account number we use the last_accno () function. After finding the last account number, it returns the last account value into the new_account () function for generating next account number.

found_account ()

To do any operation: either for modification, deletion, report(s) or updation, every time the found_account () function first checks the account, which is entered by the user whether it is in the INITIAL.dat data file or not. If it is there then a true value is returned else a false value is returned. Then depending on the value, further process can occur.

***return_name ()**

When any reports are occurred, on top of the report the account name is displayed. This function returns the name of the account holder and displays it in appropriate report.

***return_address()**

When any reports are occurred, on top of the report the account address is displayed. This function returns the address of the account holder and displays in in appropriate report.

give_balance ()

While daily transactions are occurred, the last balance is always required to update the INITITAL.dat data file. So, to know the last balance at the time of daily transactions the give_balance function returns the value to the transaction () function.

recordno ()

Either for new_account, update account, or modify account, or modify balance the recordno () function finds the record position of existing account number in the data files, where the transacted record can be overwritten.

display ()

This function is used to display the account details from either INITIAL.dat or BANKING.dat data file. While the modify() function activates, the accno parameter searches this account details from the respective file to display on the screen before modifying.

modify_account ()

This function is used to modify the existing accounts name and address at the existing location. To modify the account, it first searches the accounts' location and it is overwritten at the same location using seekg() function.

new_account()

This function is used to create a new account of a customer after entering all the details of the same. In that screen the automatic account number is created, and a proper validation are entered into the name, address, and initial deposit. After entering all the information's related to the customer, the records are appended in the INITIAL.dat and BANKING.dat data file by using a function add_to_file of both structure initial and account.

close_account ()

In the same way like delete_account () function, the close_account () function also closes all the transaction records in BANKING.dat data file. After closing the account there is no transaction record in the data files.

display_account ()

This function is used to display all the transactions including the initial deposit in the screen. This is a global report to display all the transaction records in the screen. It shows all the deposits and withdrawal column and date wise balance also.

transaction ()

The transaction () function provides a screen for making daily transactions. While transacting it shows the balance amount, and then either a transaction for deposit (D) or withdrawal (W) either by CASH or by CHEQUE.

Then the transacted record is updated in the INITITAL.dat and BANKING.data data file. Also the same functions use tow important functions update_balance () and add_to_file to update balance in INITIAL.dat data file and the transacted record in BANKING.dat data file.

clear ()

This function is used to clear the screen from a specified row and column position.

month_report ()

Like any other banking transaction, when a customer wants his monthly report statement this function helps to generate the report on the screen. When you enter a date in account number, it searches all the transactions of the previous month of the date entered and extracts a previous balance and then it displays the transactions for the relevant month. And finally it displays the current balance.

add_to_file ()

This function is used to append new record into the BANKING.dat data file. While the function activates, it passes all the fields as parameter into the function and appends as a fresh record into the file.

delete_account ()

This function is used to delete the account from the BANKING.dat data file. This is a copy method to delete the account from file.

no_of_days ()

This function is used to find total number of years, months and days.

box_for_display ()

This function is used to display the heading of the report as:

DATE PARTICULARS DEPOSIT WITHDRAWAL BALANCE