

Execution Chart:

// your header files

BankAccountMain.cpp

BankAccountHeader.h

BankAccount.cpp

// constant size of the vector

// declare a vector of BankAccount objects called bankAccVector of size = SIZE

// declare an ifstream called inFile that allows the program to open the text file

// declare an integer called largest which will hold the index for the largest BankAccount object, returned by the largest method

// declare an integer called smallest which will hold the index for the smallest BankAccount object, returned by the smallest method

// function prototypes

// method to fill array from file, details of input and output values and purpose of function

void fillArray(std::ifstream &input, std::vector<BankAccount> &bankAccVector);

// method to find the largest account using balance as key

int largest(std::vector<BankAccount> bankAccVector);

// method to find the smallest account using balance as key

int smallest(std::vector<BankAccount> bankAccVector);

// method to display all elements of the accounts vector

void printArray(std::vector<BankAccount> bankAccVector);

// finds any duplicate accounts from the given vector

void findDuplicates(std::vector<BankAccount> &bankAccVector);

// method to display the count of objects using static count variable and vector size method

void displayCount(int bankAccCount, int vectorCount);

// method to insert new bank account objects into vector at certain positions

void insertNewItems(std::vector<BankAccount> &bankAccVector);

int main() {

```
// function calls come here:  
// give the function call and a comment about the purpose,  
// and input and return value if any  
// open file  
// fill accounts vector  
// print array  
// find largest  
// display the largest  
// find smallest  
// display the smallest  
// display the count  
// find duplicates and display if found  
// display the count  
// insert new BankAccount objects into the vector  
// display the count  
}
```

Test Evidence:

FAVORITE BANK – CUSTOMER DETAILS

Account Name: Matilda Patel
Account Number: 1232
Account Balance: -4.00

Account Name: Fernando Diaz
Account Number: 1234
Account Balance: 250.00

Account Name: Vai vu
Account Number: 1240
Account Balance: 987.56

Account Name: Howard Chen
Account Number: 1236
Account Balance: 194.56

Account Name: Vai vu
Account Number: 1240
Account Balance: -888987.56

Account Name: Sugata Misra
Account Number: 1238
Account Balance: 10004.80

Account Name: Fernando Diaz
Account Number: 1234
Account Balance: 8474.00

Account Name: Lily Zhaou
Account Number: 1242
Account Balance: 1.98

Largest Balance:
Account Name: Sugata Misra
Account Number: 1238
Account Balance: 10004.80

Smallest Balance:
Account Name: Vai vu
Account Number: 1240
Account Balance: -888987.56

Using the static count, there are 8 accounts
Using vector size, there are 8 accounts

Duplicate Accounts Found : Reprinting List

FAVORITE BANK - CUSTOMER DETAILS

Account Name: Matilda Patel
Account Number: 1232
Account Balance: -4.00

Account Name: Fernando Diaz
Account Number: 1234
Account Balance: 250.00

Account Name: Vai vu
Account Number: 1240
Account Balance: 987.56

Account Name: Howard Chen
Account Number: 1236
Account Balance: 194.56

Account Name: Sugata Misra
Account Number: 1238
Account Balance: 10004.80

Account Name: Lily Zhaou
Account Number: 1242
Account Balance: 1.98

Using the static count, there are 8 accounts
Using vector size, there are 6 accounts

Inserted Three New Accounts: Reprinting List

FAVORITE BANK - CUSTOMER DETAILS

Account Name: Matilda Patel
Account Number: 1232
Account Balance: -4.00

Account Name: Fernando Diaz
Account Number: 1234
Account Balance: 250.00

Account Name: Amy Machado
Account Number: 1244
Account Balance: 1023.67

Account Name: Vai vu
Account Number: 1240
Account Balance: 987.56

Account Name: Tak Phen
Account Number: 1262
Account Balance: 6423.03

Account Name: Howard Chen
Account Number: 1236
Account Balance: 194.56

Account Name: Celia Beatle
Account Number: 1276
Account Balance: 3.56

Account Name: Sugata Misra
Account Number: 1238
Account Balance: 10004.80

Account Name: Lily Zhaou
Account Number: 1242
Account Balance: 1.98

Using the static count, there are 11 accounts
Using vector size, there are 9 accounts

Program ended with exit code: 0