class name: openClose
Method signature: public void openClose(ActionEvent event) throws IOException {}
// Check it opens and closes accounts properly

Test Case #	Requirement	Test Description and Input Data	Expected result/output
1	Open a checking account and print it out in the GUI	- First name: A - Last name: S - DOB: 11/1/2002 - Account type: Checking - Initial Deposit: 1200 - Open button	A S 11/1/2002(C) opened.
2	Close an existing checking account and print it out	- First name: A - Last name: S - DOB: 11/1/2002 - Account type: Checking - Close button	A S 11/1/2002(C) has been closed.
3	Open a money market account with sufficient initial deposit and print it out in the GUI	- First name: A - Last name: S - DOB: 11/1/2002 - Account type: money market - Initial Deposit: 2000 - Open button	A S 11/1/2002(MM) opened.
4	Close an existing money market account and print it out	- First name: A - Last name: S - DOB: 11/1/2002 - Account type: money market - Close button	A S 11/1/2002(MM) has been closed.
5	Open a money market account with insufficient initial deposit and print it out	- First name: A - Last name: S - DOB: 11/1/2002 - Account type: money market - Initial Deposit: 1200 - Open button	Minimum of $2000 to open a Money Market account.
6	Close a non-existing account	- First name: A - Last name: S - DOB: 11/1/2002 - Account type: money market - Close button	A S 11/1/2002(MM) is not in the database.

7	Open a college checking account with new brunswick campus and print it out	● First name: A ● Last name: S ● DOB: 11/1/2002 ● Account type: college checking ● Campus: New Brunswick ● Initial Deposit: 1200 ● Open button	A S 11/1/2002(CC) opened.
8	Open a college checking account with newark campus when an exact same profile already exists and print it out	● First name: A ● Last name: S ● DOB: 11/1/2002 ● Account type: college checking ● Campus: New Brunswick ● Initial Deposit: 200 ● Open button	A S 11/1/2002(CC) is already in the database.
9	Open a savings account with loyal customer button checked and print it out	● First name: A ● Last name: S ● DOB: 11/1/2001 ● Account type: Savings ● Loyalty: Loyal Customer ● Initial Deposit: 2000 ● Open button	A S 11/1/2001(S) opened.
10	Open a savings account with not loyal customer button checked and print it out	● First name: A ● Last name: S ● DOB: 11/1/2001 ● Account type: Savings ● Loyalty: Not Loyal Customer ● Initial Deposit: 2000 ● Open button	A S 11/1/2001(S) opened.
11	Open a checking account and college checking account with the same profile	● First name: A ● Last name: S ● DOB: 11/1/2001 ● Account type: Checking and college checking ● Initial Deposit: 2000 ● Open button	A S 11/1/2001(C) opened. A S 11/1/2001(CC) opened.
12	Close the two accounts in the previous test case	● First name: A ● Last name: S ● DOB: 11/1/2001 ● Account type: Checking and college checking ● Close button	A S 11/1/2001(CC) has been closed. A S 11/1/2001(C) has been

			closed.
13	Open a collegechecking account with age>24	● First name: 123 ● Last name: 321 ● DOB: 11/1/1998 ● Account type: College checking ● Initial deposit: 1 ● Open button	DOB invalid: 11/1/1998 over 24.
14	Open an account with initial deposit = 0	● First name: 123 ● Last name: 321 ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: 0 ● Open button	Initial deposit cannot be 0 or negative.
15	Open an account with initial deposit = -1	● First name: 123 ● Last name: 321 ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: -1 ● Open button	Initial deposit cannot be 0 or negative.
16	Open an account with missing initial deposit	● First name: 123 ● Last name: 321 ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: null ● Open button	Missing data for opening an account.
17	Open an account with first name missing	● First name: null ● Last name: 321 ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: 2000 ● Open button	Missing data for opening an account.
18	Open an account with last name missing	● First name: 123 ● Last name: null ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: 2000 ● Open button	Missing data for opening an account.
18	Open an account with last name missing	● First name: 123 ● Last name: 321 ● DOB: null ● Account type: Checking	Missing data for opening an account.

		● Initial deposit: 2000 ● Open button	
19	Open an account with dob missing	● First name: 123 ● Last name: 321 ● DOB: null ● Account type: Checking ● Initial deposit: 2000 ● Open button	Missing data for opening an account.
20	Open an account with everything missing	● First name: null ● Last name: null ● DOB: null ● Account type: Checking ● Initial deposit: null ● Open button	Missing data for opening an account.
21	Open an account with age<16	● First name: A ● Last name: D ● DOB: 11/1/2008 ● Account type: Checking ● Initial deposit: 2000 ● Open button	DOB invalid: 11/1/2008 under 16.
22	Open an account with invalid amount	● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: AAA ● Open button	Not a valid amount.

class name: depositWithdraw
Method signature: public void depositWithdraw(ActionEvent event) throws IOException {
// Check it deposits and withdraws from accounts properly

Test Case #	Requirement	Test Description and Input Data	Expected result/output
1	Deposit to a checking account	● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: 2000 ● Deposit amount: 200 ● Open button ● Deposit button	A S 11/1/2001(C) Deposit - balance updated.
2	Deposit to a non-existing	● First name: A	A S

	account	- Last name: D - DOB: 11/1/2001 - Account type: CollegeChecking - Deposit amount: 200 - Open button - Deposit button	11/1/2001(CC) is not in the database.
3	Withdraw from an existing account	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: Checking - Initial deposit: 2200 - Withdraw amount: 1 - Open button - Withdraw button	A S 11/1/2001(C) Withdraw - balance updated.
4	Withdraw from a non-existing account	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: CollegeChecking - Deposit amount: 1 - Open button - Withdraw button	A S 11/1/2001(CC) is not in the database.
5	Withdraw from an existing account with withdraw amount>initial deposit	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: Checking - Initial deposit: 2199 - Withdraw amount: 2200 - Open button - Withdraw button	A S 11/1/2001(C) Withdraw - insufficient fund.
6	Deposit to an existing account but with first name missing	- First name: null - Last name: D - DOB: 11/1/2001 - Account type: Checking - Deposit amount: 200 - Open button - Deposit button	Invalid data for deposit
7	Withdraw from an existing account but with first name missing	- First name: null - Last name: D - DOB: 11/1/2001 - Account type: Checking - Withdraw amount: 200 - Open button - Withdraw button	Invalid data for withdrawal

8	Deposit to an existing account but with last name missing	- First name: A - Last name: null - DOB: 11/1/2001 - Account type: Checking - Deposit amount: 200 - Open button - Deposit button	Invalid data for deposit
9	Withdraw from an existing account but with last name missing	- First name: A - Last name: null - DOB: 11/1/2001 - Account type: Checking - Withdraw amount: 200 - Open button - Withdraw button	Invalid data for withdrawal
10	Deposit to an existing CollegeChecking account	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: CollegeChecking - Initial Deposit: 2000 - Withdraw amount: 200 - Open button - Deposit button	A D 11/1/2001(CC) Deposit - balance updated.
11	Withdraw from an existing CollegeChecking account	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: CollegeChecking - Initial Deposit: 2000 - Withdraw amount: 200 - Open button - Withdraw button	A D 11/1/2001(CC) Withdraw - balance updated.
12	Deposit to an existing Savings account	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: Savings - Initial Deposit: 2000 - Withdraw amount: 200 - Open button - Deposit button	A D 11/1/2001(S) Deposit - balance updated.
13	Withdraw from an existing Savings account	- First name: A - Last name: D - DOB: 11/1/2001 - Account type: Savings - Initial Deposit: 2000	A D 11/1/2001(S) Withdraw - balance updated.

		● Withdraw amount: 200 ● Open button ● Withdraw button	
14	Deposit to an existing MoneyMarket account	● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: MoneyMarket ● Initial Deposit: 2000 ● Withdraw amount: 200 ● Open button ● Deposit button	A D 11/1/2001(MM) Deposit - balance updated.
15	Withdraw from an existing MoneyMarket account	● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: MoneyMarket ● Initial Deposit: 2000 ● Withdraw amount: 200 ● Open button ● Withdraw button	A D 11/1/2001(MM) Withdraw - balance updated.
16	Deposit with an invalid amount	● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: checking ● Initial Deposit: 2000 ● Deposit amount: AAA ● Open button ● Deposit button	Not a valid amount.
17	Withdraw with an invalid amount	● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: checking ● Initial Deposit: 2000 ● Withdraw amount: AAA ● Open button ● Deposit button	Not a valid amount.

class name: accountDatabaseTab **Method signature:** public void accountDatabaseTab(ActionEvent event) throws IOException {} //Manages all the accounts	

Test Case #	Requirement	Test Description and Input Data	Expected result/output
1	Press the Print All	● Print All	Account Database is empty!

	Accounts button with no accounts in the database	Accounts Button	
2	Press the Print Interests and Fees button with no accounts in the database	● Print Interests and Fees button	Account Database is empty!
3	Press the Update Accounts with Interests and Fees button with no accounts in the database	● Interests and Fees button	Account Database is empty!
4	Press the Import File button and choose bankAccounts.txt	● Import File button ● bankAccounts.txt	John Doe 2/19/2000(CC) opened. Jane Doe 10/1/2000(CC) opened. Jane Doe 10/1/1995(S) opened. Jane Doe 10/1/1995(MM) is already in the database. April March 1/15/1987(C) opened. April March 1/15/1987(S) is already in the database. Jason Brown 3/31/1998(C) opened. Kate Lindsey 8/31/2001(C) opened. Roy Brooks 10/31/2007(MM) opened. Roy Brooks 10/1/2007(MM) opened. April March 1/15/1987(MM) is already in the database. Chris Young 9/20/2006(CC) opened. Duke Ellington 11/2/2002(CC) opened. Kate Lindsey 11/2/2002(CC) opened. John Doe 2/19/1990(S) opened.
5	Press the Import File button and choose Project2TestCases.txt	● Press the Import File button and choose Project2TestCases.txt	Whatever Project2ExpectedOutput.txt is
6	After importing bankAccounts.txt, press Print All Accounts button	● Import bankAccounts.txt ● Print All Accounts button	*Accounts sorted by account type and profile. Checking::Jason Brown 3/31/1998::Balance $1,200.00 Checking::Kate Lindsey 8/31/2001::Balance $450.00 Checking::April March

			1/15/1987::Balance $300.00 College Checking::Jane Doe 10/1/2000::Balance $999.99::NEW_BRUNSWICK College Checking::John Doe 2/19/2000::Balance $599.99::NEW_BRUNSWICK College Checking::Duke Ellington 11/2/2002::Balance $900.00::NEWARK College Checking::Kate Lindsey 11/2/2002::Balance $200.00::CAMDEN College Checking::Chris Young 9/20/2006::Balance $500.00::NEW_BRUNSWICK Money Market::Savings::Roy Brooks 10/1/2007::Balance $2,909.10::is loyal::withdrawal: 0 Money Market::Savings::Roy Brooks 10/31/2007::Balance $2,909.10::is loyal::withdrawal: 0 Savings::Jane Doe 10/1/1995::Balance $1,000.00 Savings::John Doe 2/19/1990::Balance $200.00 *end of list.
7	After importing bankAccounts.txt, press Print Interests and Fees button	• Import bankAccounts.txt • Print Interests and Fees button	*list of accounts with fee and monthly interest Checking::Jason Brown 3/31/1998::Balance $1,200.00::fee $0.00::monthly interest $1.00 Checking::Kate Lindsey 8/31/2001::Balance $450.00::fee $12.00::monthly interest $0.38 Checking::April March 1/15/1987::Balance $300.00::fee $12.00::monthly interest $0.25 College Checking::Jane Doe 10/1/2000::Balance $999.99::NEW_BRUNSWICK::fee $0.00::monthly interest $0.83 College Checking::John Doe 2/19/2000::Balance $599.99::NEW_BRUNSWICK::fee $0.00::monthly interest $0.50 College Checking::Duke Ellington 11/2/2002::Balance $900.00::NEWARK::fee

| | | | $0.00::monthly interest $0.75
College Checking::Kate Lindsey 11/2/2002::Balance $200.00::CAMDEN::fee $0.00::monthly interest $0.17
College Checking::Chris Young 9/20/2006::Balance $500.00::NEW_BRUNSWICK::fee $0.00::monthly interest $0.42
Money Market::Savings::Roy Brooks 10/1/2007::Balance $2,909.10::is loyal::withdrawal: 0::fee $0.00::monthly interest $11.52
Money Market::Savings::Roy Brooks 10/31/2007::Balance $2,909.10::is loyal::withdrawal: 0::fee $0.00::monthly interest $11.52
Money Market::Savings::Jane Doe 10/1/1995::Balance $2,000.00::is loyal::withdrawal: 0::fee $0.00::monthly interest $7.92
Money Market::Savings::April March 1/15/1987::Balance $2,500.00::is loyal::withdrawal: 0::fee $0.00::monthly interest $9.90
Savings::Jane Doe 10/1/1995::Balance $1,000.00::fee $0.00::monthly interest $3.33
Savings::John Doe 2/19/1990::Balance $200.00::fee $25.00::monthly interest $0.67
Savings::April March 1/15/1987::Balance $1,500.00::is loyal::fee $0.00::monthly interest $5.31
*end of list. |
| 8 | After importing bankAccounts.txt, press Update Accounts with Interests and Fees button | • Import bankAccounts.txt
• Print Accounts with Interests and Fees button | *list of accounts with fee and monthly interest
Checking::Jason Brown 3/31/1998::Balance $1,200.00::fee $0.00::monthly interest $1.00
Checking::Kate Lindsey 8/31/2001::Balance $450.00::fee $12.00::monthly interest $0.38
Checking::April March 1/15/1987::Balance $300.00::fee $12.00::monthly interest $0.25
College Checking::Jane Doe 10/1/2000::Balance $999.99::NEW_BRUNSWICK::fee |

			$0.00::monthly interest $0.83 College Checking::John Doe 2/19/2000::Balance $599.99::NEW_BRUNSWICK::fee $0.00::monthly interest $0.50 College Checking::Duke Ellington 11/2/2002::Balance $900.00::NEWARK::fee $0.00::monthly interest $0.75 College Checking::Kate Lindsey 11/2/2002::Balance $200.00::CAMDEN::fee $0.00::monthly interest $0.17 College Checking::Chris Young 9/20/2006::Balance $500.00::NEW_BRUNSWICK::fee $0.00::monthly interest $0.42 Money Market::Savings::Roy Brooks 10/1/2007::Balance $2,909.10::is loyal::withdrawal: 0::fee $0.00::monthly interest $11.52 Money Market::Savings::Roy Brooks 10/31/2007::Balance $2,909.10::is loyal::withdrawal: 0::fee $0.00::monthly interest $11.52 Savings::Jane Doe 10/1/1995::Balance $1,000.00::fee $0.00::monthly interest $3.33 Savings::John Doe 2/19/1990::Balance $200.00::fee $25.00::monthly interest $0.67 *end of list.

class name: menuBar
Method signature: public void menuBar(ActionEvent event) throws IOException {}
// Organize all the functions and put them into a menu bar

Test Case #	Requirement	Test Description and Input Data	Expected result/output
1	Click on Account bar, it should show an item Open/Close that should. Click on Open/Close and it should lead to out Open/Close	● Account bar ● Open/Close item ● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: Checking	A D 11/1/2001(C) opened. A D 11/1/2001(C) has been closed.

	window. Open an account and close it	● Initial deposit: 2000 ● Open button ● Close button	
2	Click on Account bar, it should show an item Open/Close that should. Click on Open/Close and it should lead to out Open/Close window. Open an account. Go back to Account bar and choose Deposit/Withdraw item. Deposit and withdraw money into/out of that account.	● Account bar ● Open/Close item ● First name: A ● Last name: D ● DOB: 11/1/2001 ● Account type: Checking ● Initial deposit: 2000 ● Open button ● Account bar ● Deposit/Withdraw item ● Deposit/withdraw amount: 200	A D 11/1/2001(C) Deposit - balance updated. A D 11/1/2001(C) Withdraw - balance updated.
3	Continue from test case #2: open menu bar again, select Accounts, and press Print all	● Account bar ● Print all	*Accounts sorted by account type and profile. Checking::A D 11/1/2001::Balance $2,000.00 *end of list.
4	Continue from test case #3: select Interests and Fees bar, and choose Update interests and fees	● Interests and Fees bar ● Update interests and fees	*list of accounts with fees and interests applied. Checking::A D 11/1/2001::Balance $2,001.67 *end of list.
5	Continue from test case#4: select Interests and Fees bar, and choose Print interests and fees	● Interests and Fees bar ● Print interests and fees	*list of accounts with fee and monthly interest Checking::A D 11/1/2001::Balance $2,001.67::fee $0.00::monthly interest $1.67 *end of list.
6	Open Menu Bar, select Accounts tab, press Load from file, choose bankAccounts.txt	● Menu Bar ● Accounts tab ● Load from file ● bankAccounts.tx	John Doe 2/19/2000(CC) opened. Jane Doe 10/1/2000(CC) opened. Jane Doe 10/1/1995(S) opened.

			Jane Doe 10/1/1995(MM) is already in the database. April March 1/15/1987(C) opened. April March 1/15/1987(S) is already in the database. Jason Brown 3/31/1998(C) opened. Kate Lindsey 8/31/2001(C) opened. Roy Brooks 10/31/2007(MM) opened. Roy Brooks 10/1/2007(MM) opened. April March 1/15/1987(MM) is already in the database. Chris Young 9/20/2006(CC) opened. Duke Ellington 11/2/2002(CC) opened. Kate Lindsey 11/2/2002(CC) opened. John Doe 2/19/1990(S) opened.