CIS25 Midterm

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2025.11.05

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Thank you for opening a bank acount with us!
What is your name?
Voldemort|
```

A BankAccount object is created, which is confirmed by thanking the user for opening an account. Then the code prompts the user to input the name that the bank account will be under. In this example, the user's name is Voldemort, and he is an evil wizard.

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Thank you for opening a bank acount with us!
What is your name?
Voldemort
Would you like to enable overdraft privileges? Overdraft fee is 35 USD per tran
saction. Type y for yes and n for no:
y
```

Then the user is prompted to set their account to allow or not allow overdrafting with n for no overdraft and y for yes to overdraft. In this example, Voldemort chooses to be able to overdraft his account because he is a chaotic Dark Lord, so he inputs 'y'.

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print State
ment | q to Quit
What would you like to do with your account?
b
How much do you want to deposit?
100
Hello Voldemort, you have deposited $100. Your new balance is $100
```

A menu is printed out, with letters to input corresponding to actions that can be done to the bank account. This example showcases the deposit funds option, where the user is prompted to input how much money they choose to add to the account, then prints out a confirmation of what the user did, as well as their updated balance. In this example, Voldemort inputs 'b' to choose the Deposit Funds option and deposits 100 dollars that he stole off of a Muggle, and you can see his bank account balance reflects the addition of 100 dollars.

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit

What would you like to do with your account?
a
What is the name of the item you purchased?
wand
What is the cost of the item in USD?
600
You purchased wand for $600. Your new balance is $-535
```

Since the user has not chosen to quit the program yet, the menu will print out again. This time the selection for Make Purchase is featured. After inputting 'a' to Make Purchase, the user is asked for the name and cost of the item. Then the program prints out a confirmation of the purchase as well as the updated balance. In this example, Voldemort purchased a wand for 600 dollars which is more than he has in his account. Since he enabled overdrafting, his bank balance goes negative. There is an additional 35 dollars deducted as an overdraft fee on top of the 600 for the wand, hence the negative balance of -535 USD.

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit

What would you like to do with your account?
b
How much USD do you want to deposit?
1500000
Hello Voldemort, you have deposited $1.5e+06. Your new balance is $1.49946e+06

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
```

Here is another example of the the Deposit Funds function in action. In this example, Voldemort deposits 1.5 million dollars. He realized he was in dire need of funds after his recent overdraft, so he scammed Wall Street out of 1.5 million dollars and deposited it into his account.

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit

What would you like to do with your account?
c
Hello Voldemort, your balance is $1.49946e+06
```

Another option in the menu is to input 'c' in order to see the bank account balance. This function simply prints out a sentence informing the user of how much money there is in the account. In this example, Voldemort wanted to admire how much money he has now, so he chose the Print Balance option to print out his balance to admire his 1,499,465 dollars.

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit

What would you like to do with your account?
a
What is the name of the item you purchased?
Snake
What is the cost of the item in USD?
1400000
You purchased Snake for $1.4e+06. Your new balance is $99465
```

Here is another example of the Make Purchase option in action. In this example, Voldemort purchases a snake for 1.4 million dollars. It's very expensive because this snake is magical and can turn into a human being. His new balance after buying the snake is 99465 dollars.

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
d
Deposit: 100 | Deduction: 0 | Item: Cash | Balance: 100
Deposit: 0 | Deduction: 600 | Item: wand | Balance: -535
Deposit: 1.5e+06 | Deduction: 0 | Item: Cash | Balance: 1.49946e+06
Deposit: 0 | Deduction: 1.4e+06 | Item: Snake | Balance: 99465
```

This focuses on the Print Statement feature, which will print out all the deposits and purchases that have happened with the bank account. The user inputs 'd' to access this statement. In this example, Voldemort uses the Print Statement so he can see his 2 deposits and 2 purchases. He needs to send these to his accountant because it is tax season. The last line shows the most recent transaction, so the Balance in that line is the most updated and recent final balance. At the time of printing this statement, Voldemort has 99465 dollars in his account. All the information in this statement is also saved in a transaction.txt file!

```
Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
q

C:\Users\EmiZh\Documents\C++\CIS_25\Midterm_CIS25\x64\Debug\Midterm_CIS25.exe (process 14744) exited with co
de 0 (0x0).
Press any key to close this window . . .
```

This shows the Quit option which is activated by inputting 'q' after the menu prompt. This will satisfy the condition to break out of the do while loop in the code. In this example, Voldemort decided to quit his bank account activities because he has to go on the run off the grid, so when the menu prompted him to input, he input 'q' to Quit.

```
a
What is the name of the item you purchased?
wand
What is the cost of the item in USD?
600
You purchased wand for $600. Your new balance is $-535

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
b
How much USD do you want to deposit?
1500000
Hello Voldemort, you have deposited $1.5e+06. Your new balance is $1.49946e+06

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
c
Hello Voldemort, your balance is $1.49946e+06

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
a
What is the name of the item you purchased?
Snake
What is the cost of the item in USD?
1400000
You purchased Snake for $1.4e+06. Your new balance is $99465

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
d
Deposit: 100 | Deduction: 0 | Item: Cash | Balance: 100
Deposit: 0 | Deduction: 600 | Item: wand | Balance: -535
Deposit: 1.5e+06 | Deduction: 0 | Item: Cash | Balance: 1.49946e+06
Deposit: 0 | Deduction: 1.4e+06 | Item: Snake | Balance: 99465

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
q

C:\Users\EmiZh\Documents\C++\CIS_25\Midterm_CIS25\x64\Debug\Midterm_CIS25.exe (process 14744) exited with code 0 (0x0).
Press any key to close this window . . .
```

Here is the screenshot of all the actions and interactions with the bank account program.

```
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Thank you for opening a bank acount with us!
What is your name?
Harry
Would you like to enable overdraft privileges? Overdraft fee is 35 USD per transaction. Type y for yes and n for no:
n

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
b
How much USD do you want to deposit?
200
Hello Harry, you have deposited $200. Your new balance is $200

Here is the lower case letter you should enter for which action:
a to Make Purchase | b to Deposit Funds | c to Print Balance | d to Print Statement | q to Quit
What would you like to do with your account?
a
What is the name of the item you purchased?
Wand
What is the cost of the item in USD?
600
The transaction didn't go through because the cost of the item was greater than your balance of $200
```

This is an example of the main difference an account with overdraft disabled would have. When the user tries to purchase something that is more money than what their account has, that transaction will not even go through. In this example, a more responsible person named Harry chose not to allow overdraft. When he tried to purchase a wand for $600 when his account only had $200, the transaction didn't go through.