Enzo Coglitore. Part of group with (Michael Shahidi + Steve Nguyen)
ITP 265: Coffee
9/12/2020
HW03: CreditCard

```
Store.main({ });
Before you can get to the store, we need you to make a credit card!
What is your name?
Michael Shahidi
What is your zip code?
12345
Enter your credit card number (16 digits w/ spaces)
1234 1234 1234 1234
Enter your security code (3 digits)
blah
Didn't recognize blah as an integer...
Enter your security code (3 digits)
123
Enter your expiration date (mm/yy)
01/23
********************************************************************
Welcome to: Enzo's store

Here is your credit card:
Michael Shahidi's Credit Card:
Number: 1234 1234 1234 1234
Security Code: 123
Expiration Date: 01/23
Zip Code: 12345
Balance: $500.0

Here is our list of books:
"Lord of the Flies" by William Golding (Hardcover; 224 pages) $5.99
"Intelligent Investor" by Benjamin Graham (Hardcover; 640 pages) $14.3
"Kindred" by Ocatvia Butler (Hardcover; 264 pages) $10.49
"The Alchemist" by Paulo Coelho (Hardcover; 163 pages) $14.4
"Extreme Ownership" by Jocko Willink (Hardcover; 351 pages) $13.95

Here are our list of beverages:
Beverage: Kombucha, $9.5
Beverage: Iced Coffee, $4.5
Beverage: Water, $2.5
********************************************************************
Do you want to buy a book/beverage/checkout? (book, beverage, checkout)
bookk
This choice has not been recognized as book, beverage, or checkout
Do you want to buy a book/beverage/checkout? (book, beverage, checkout)
book
Please choose a number between 1-5!
6
6 is not in the allowed range, 1 - 5
Please choose a number between 1-5!
1
You purchased book1!
Your new card balance is: $494.01
Do you want to buy a book/beverage/checkout? (book, beverage, checkout)
beverage
Please choose a number between 1-3!
-1
-1 is not in the allowed range, 1 - 3
Please choose a number between 1-3!
1
You purchased beverage1!
Your new card balance is: $484.51
Do you want to buy a book/beverage/checkout? (book, beverage, checkout)
Book
Please choose a number between 1-5!
3
You purchased book3!
Your new card balance is: $474.02
Do you want to buy a book/beverage/checkout? (book, beverage, checkout)
checkout
Thank you for shopping at Enzo's store. You bought: book1 beverage1 book3
Your new balance is : $474.02
```

Credit Card
+ name: String + number: String + zipCode: int - securityCode: int - expirationDate: String + balance: double
+ getBalance(): double + setBalance(amount: double): void + getName(): String + setName(name: String): void +toString(): String

1) We have a couple classes in this program. We have a store class, a credit card class, a book class, and a beverage class. These are all unique objects that we have to construct, in this case we make credit card, book, and beverage inside of the store class, so we can have a working store. This would be quite hard to do in one class, as it would get very clustered. It is technically possible to have everything within the store class, but it would be one long, messy class. If we had multiple people, it would be fine. Since we broke it up into a credit card class, store class, and multiple object classes, we can have each individual credit card interact with the store classes and book classes and update their values accordingly.

2) We have an example of composition in our store. Our store cannot exist without the items on the shelves (books + beverages). In this case, if there was no books or beverages, the store would have nothing to sell, and it would not exist.

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3) The store object can access the credit card balance by using the accessor. It is not a local variable stored within the store class, but rather it is being accessed through our method. We update our balance through the mutator, instead of just "re-defining" it through a statement.

4) We did various error-checking's for the credit card creation. First we made sure that if things needed to be numbers, that we recognized when the user inputted a string instead. Second, we also checked for length of credit card to make sure it was within the proper range. Furthermore, we allowed the user to create their own credit card, instead of making one with a predefined number, expiration date, etc.

5) No questions.

6) Self Assessment:

   a. I would give myself an A for this code. I designed the diagram, created the credit card class, and did around 60% of integrating it into my previous BookTeaque store.

   b. I would give myself an A on the understanding of the code. At first, OOP was a struggle for me. However, I am now able to easily create separate classes and objects and construct them within a big object (store class). This shows to me that I understand how methods, objects, and the whole structure is supposed to be working.

   c. I would also give myself an A on the OOP concepts. Now that I see how Java works, it makes a lot of sense to have things be broken up into methods, objects, and classes. It's a different language from Python, but it has a lot of strong capabilities. It almost makes intuitive sense once you practice it for a while, as you can see the structures in your head.