Shopping cart assignment

Zac and Soham
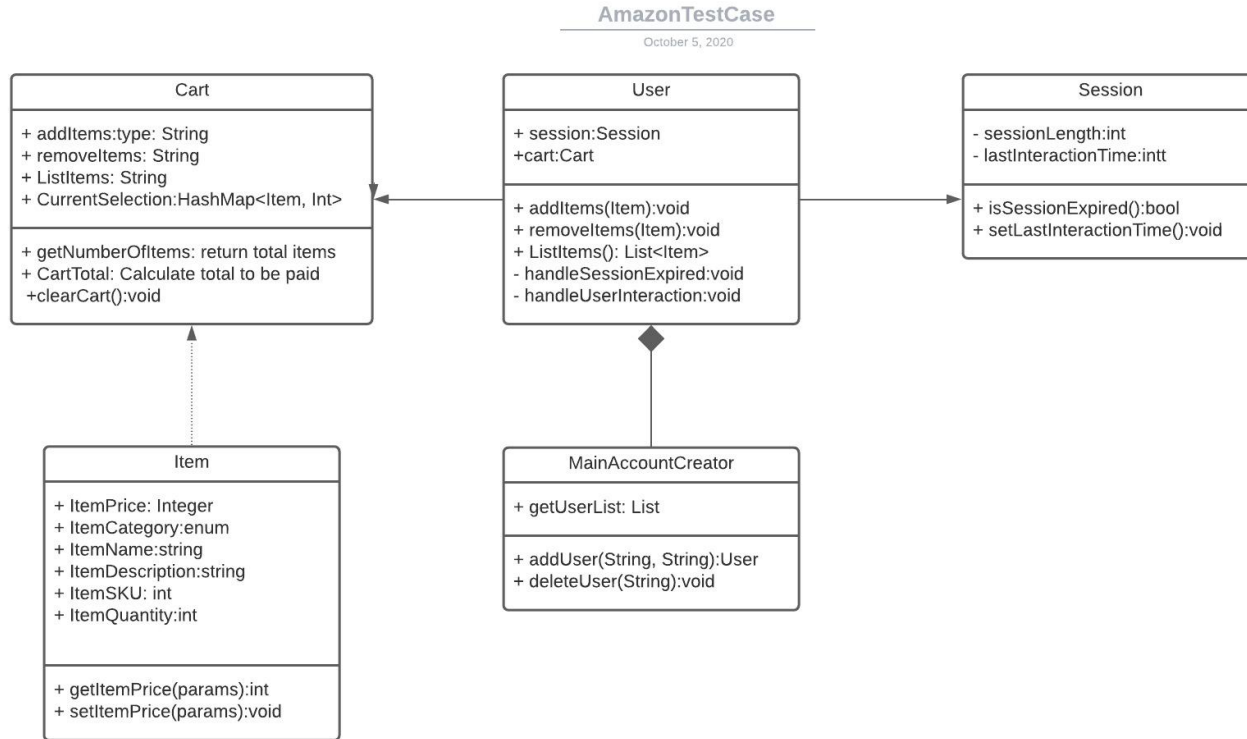
Classes

We have used the following classes:

- **User**: Encompasses the complete user journey on the site

- **Session**: Determines the length of each session of the user

- **Cart**: Covers the user's choices and final journey

- **Item**: Includes all basic attributes (name/price/category/description)

- **AccountCreator**: Maintain list of all user accounts

UML Diagram

AmazonTestCase

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Cart

+ addItems:type: String
+ removeItems: String
+ ListItems: String
+ CurrentSelection:HashMap<Item, Int>

+ getNumberOfItems: return total items
+ CartTotal: Calculate total to be paid
+clearCart():void

User

+ session:Session
+cart:Cart

+ addItems(Item):void
+ removeItems(Item):void
+ ListItems(): List<Item>
- handleSessionExpired:void
- handleUserInteraction:void

Session

- sessionLength:int
- lastInteractionTime:intt

+ isSessionExpired():bool
+ setLastInteractionTime():void

Item

+ ItemPrice: Integer
+ ItemCategory:enum
+ ItemName:string
+ ItemDescription:string
+ ItemSKU: int
+ ItemQuantity:int

+ getItemPrice(params):int
+ setItemPrice(params):void

MainAccountCreator

+ getUserList: List

+ addUser(String, String):User
+ deleteUser(String):void

Code

https://github.com/zacbennett/amazon-mock-assignment

Creational Pattern used: Singleton

We have used the following behavior pattern because:

Our MainAccountCreator class requires a database connection to make a user and we only want one object connected to the database at a time.

Structural Pattern Used: Facade

We have used the following behavior pattern because:

On the Session Class, we have a method called isSessionExpired. By using the facade pattern, the client only knows that the method returns a boolean, and is not aware of how we determine if the session is expired.

Thanks!

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