

Algorithm for driver logic:

Check if there is a file

 If not end program

Open and Read the file

Create and ArrayList of items for Shopping Cart

For every line in file

 Create a transaction object that checks if the input is valid and stores the different

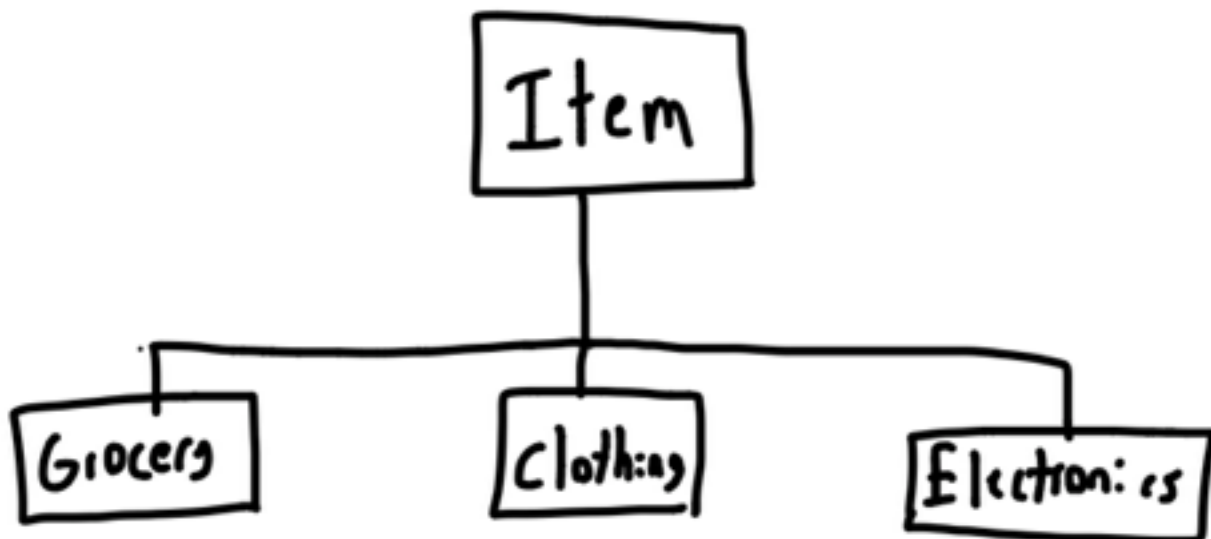
 If the input is a valid transaction

 Process the transaction

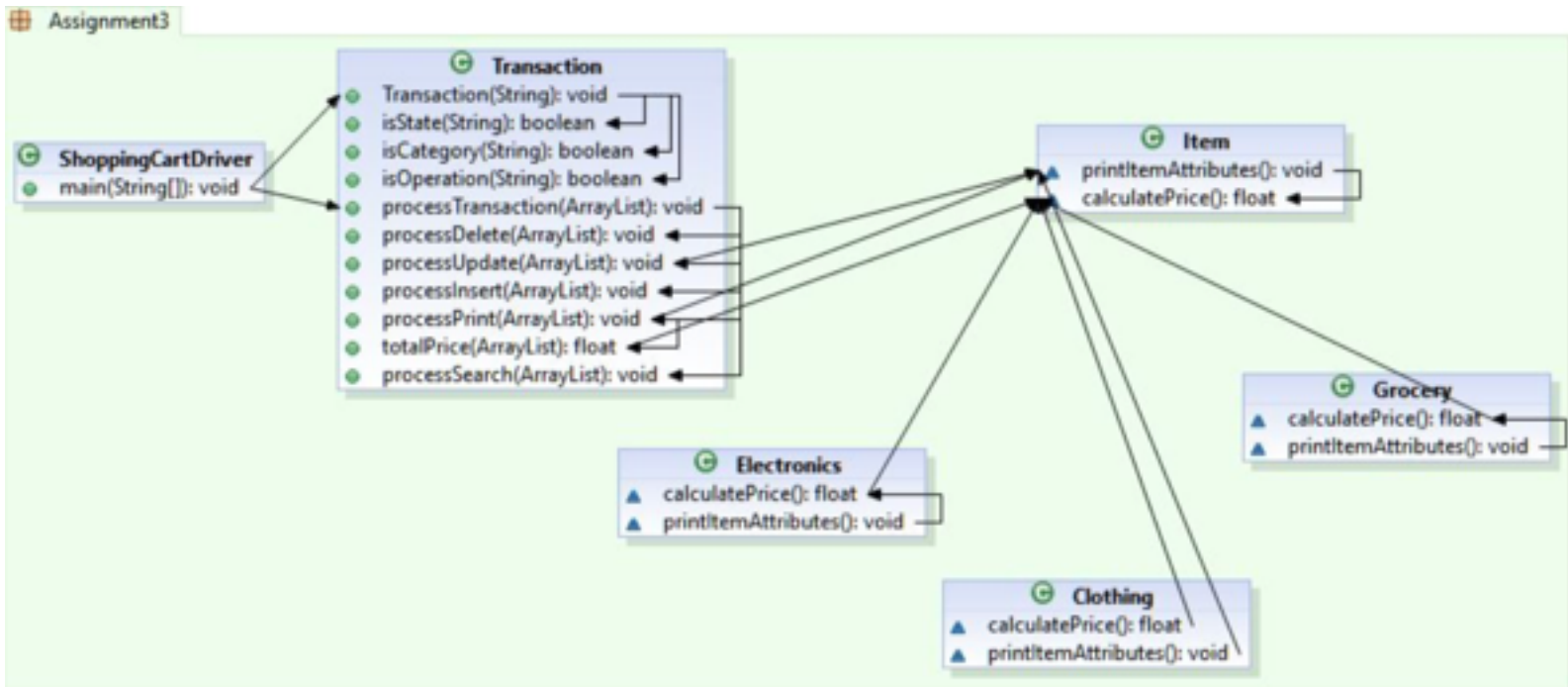
 Else

 Tell the user the input is not valid

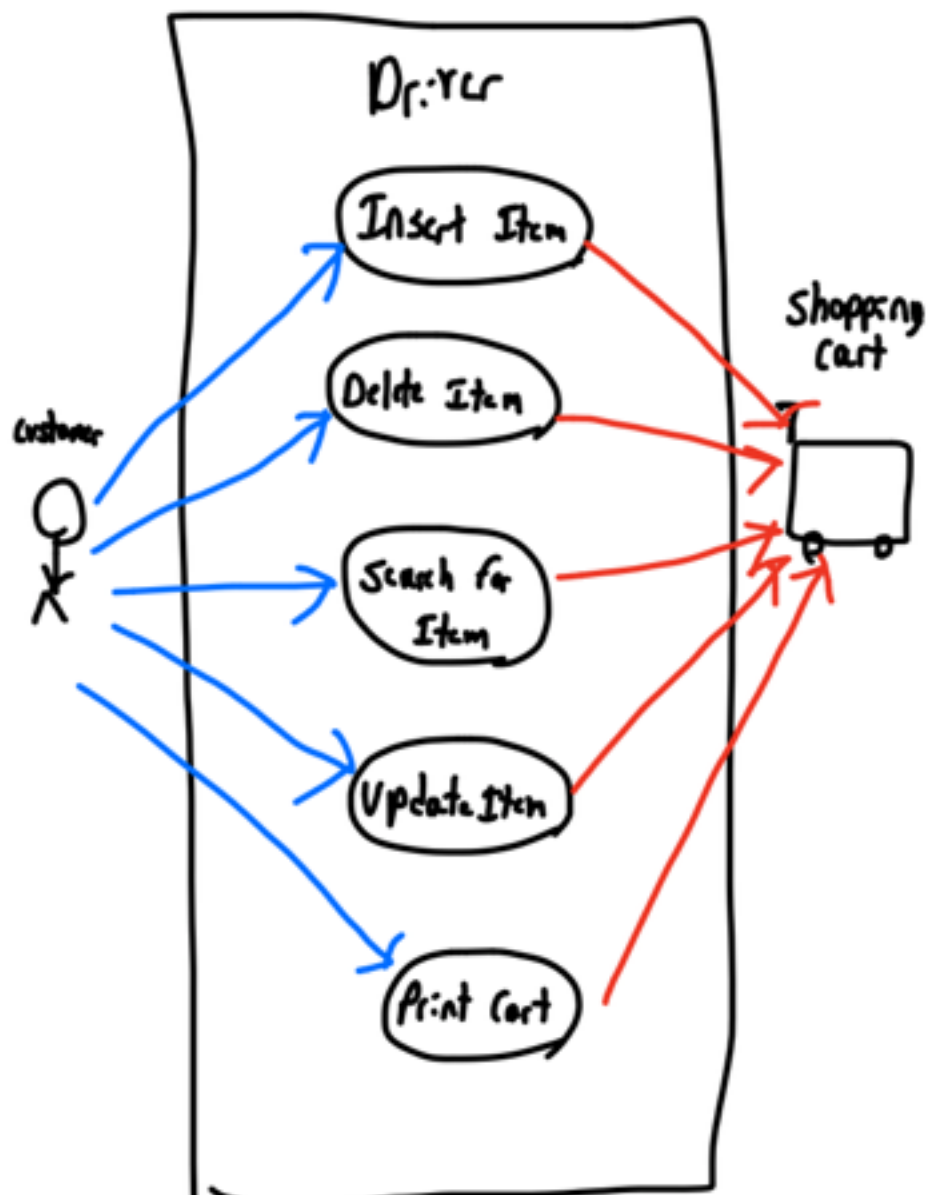
UML:



FBD:



User Case Diagram:



Class Descriptions

Item - Base class, includes name, price, quantity, and weight of an item. Has methods for calculating price, printing item attributes, updating the quantity, and get methods for each variable.

Grocery (extends item) - contains Boolean to determine perishable or not, overrides price calculation to include premium shipping if perishable, overrides print method to include Boolean perish

Clothing (extends item) - Overrides price calculation to include tax

Electronics (extends item) - contains Boolean to represent fragility and String state to represent state it is purchased from, overrides price calculation to include premium shipping if fragile and tax if from a taxed state, overrides print to include fragility and state.