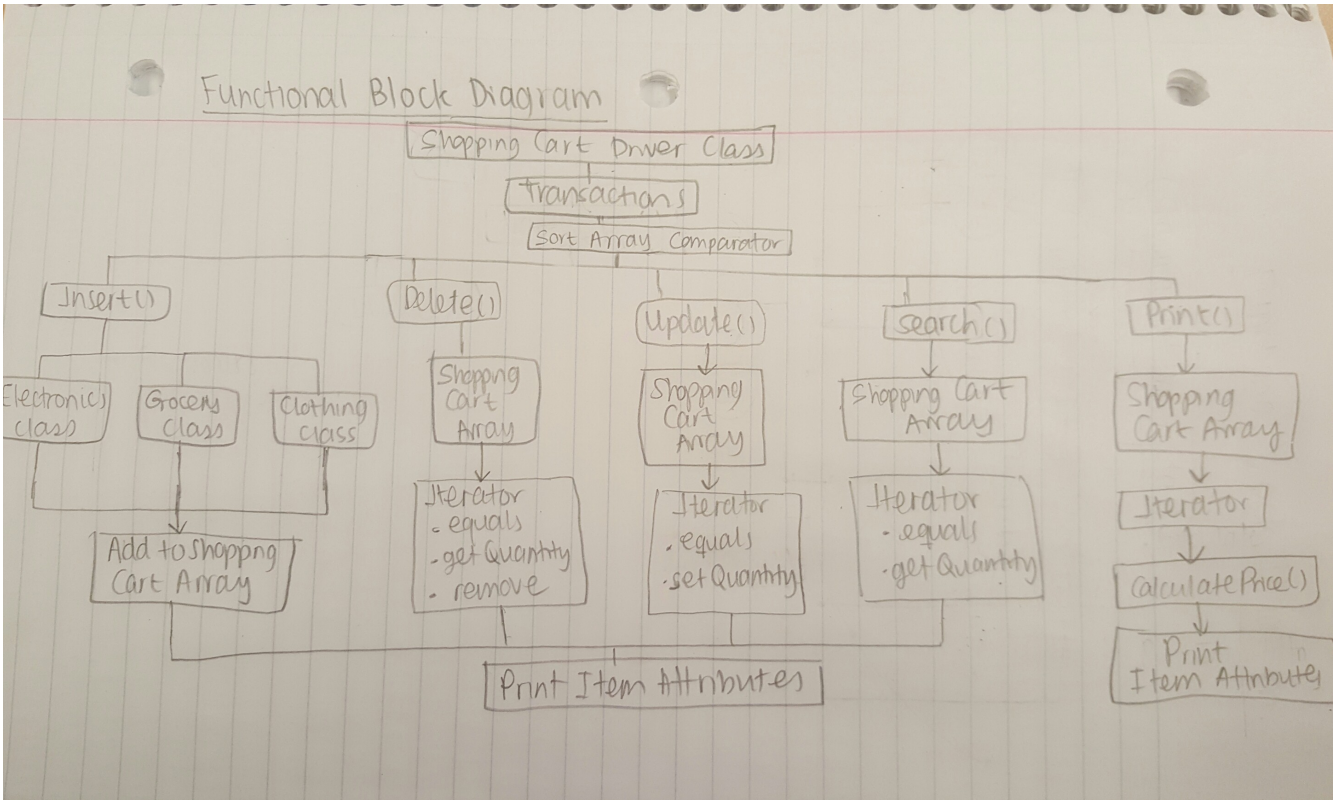

Functional Block Diagram
Shopping Cart Driver Class
Transactions
Sort Array Comparator
Insert()
Delete()
Update()
search()
Print()
Electronics class
Grocery Class
Clothing class
Shopping Cart Array
Shopping Cart Array
Shopping Cart Array
Shopping Cart Array
Add to Shopping Cart Array
Iterator
- equals
- get Quantity
- remove
Iterator
- equals
- set Quantity
Iterator
- equals
- get Quantity
Iterator
Calculate Price()
Print Item Attributes
Print Item Attributes
Print Item Attributes

ADT

Class: Shopping Cart Driver

▸ Methods:
- processLineInFile (string filename)
  Pre: There exists a text file
  Post: Go over the file, line by line.
  Parameters: String text file

- transaction (string s)
  Pre: File exists and string is not empty.
  Post: line is split in words & stored in array.
  Get first word and go to designated method.

(Basic Methods in the ShoppingCart driver class).

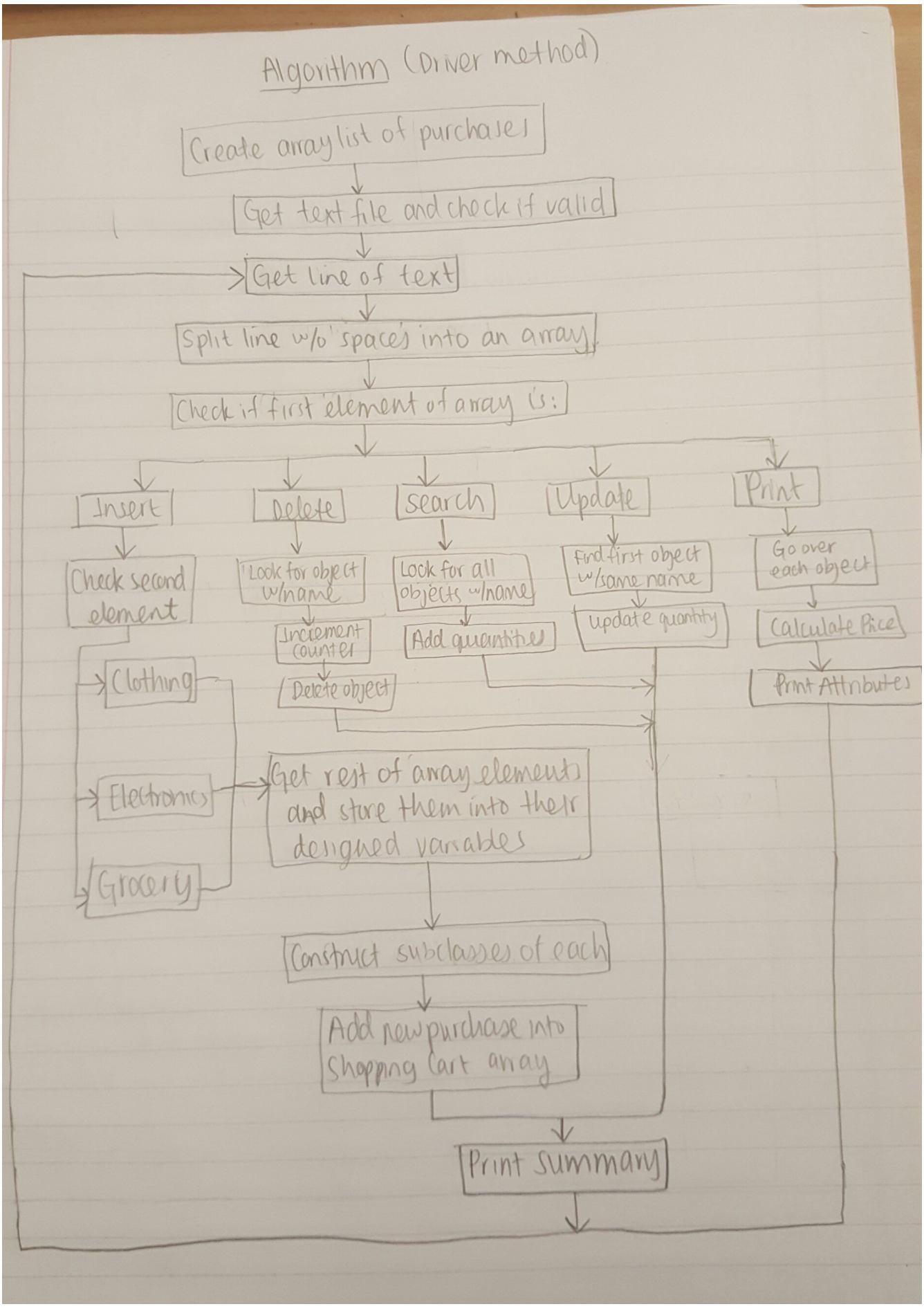
- insert (string [] input)
  Pre: First element in array of string is "insert".
  Post: store elements of array to designated variables and construct a subclass of either clothing, Groceries or Electronics. Print summary.
  Parameters: Array of strings.
- search (string [] input)
  Pre: First element in array of string is "search".
  Post: Print number of objects with the same name
  Parameters: Array of strings

Class: Electronics

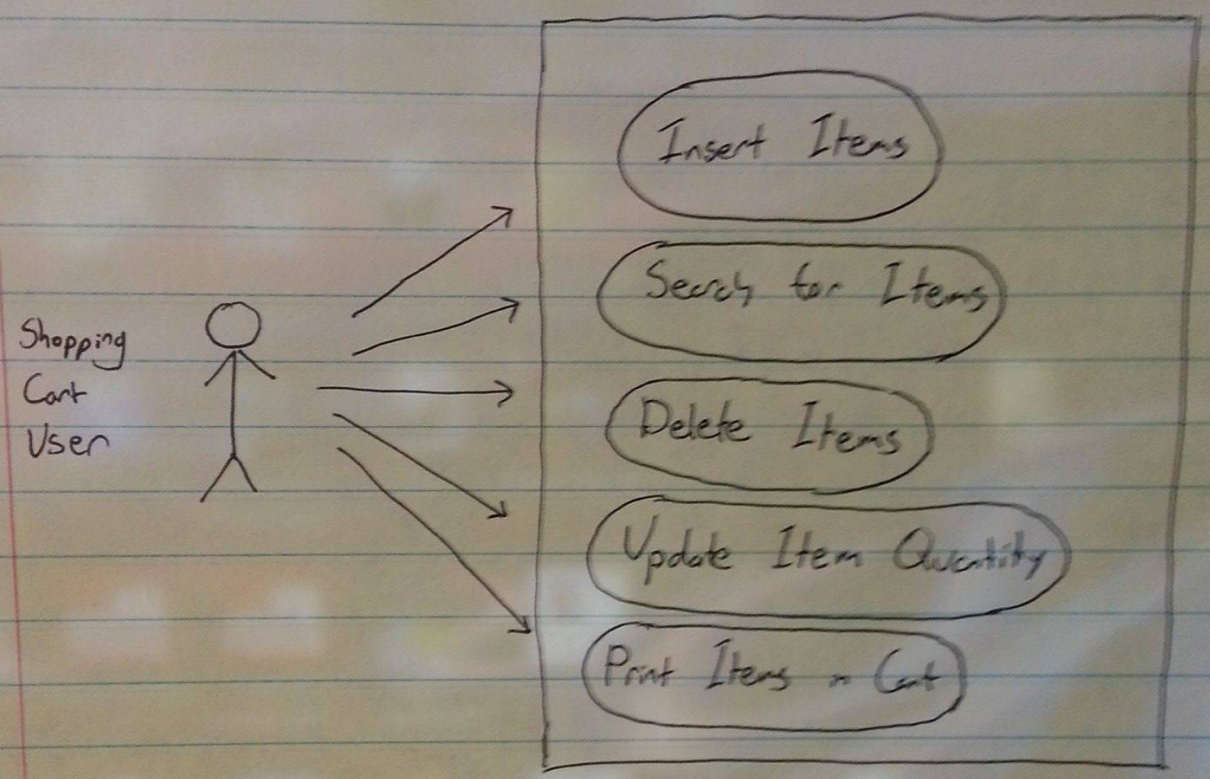
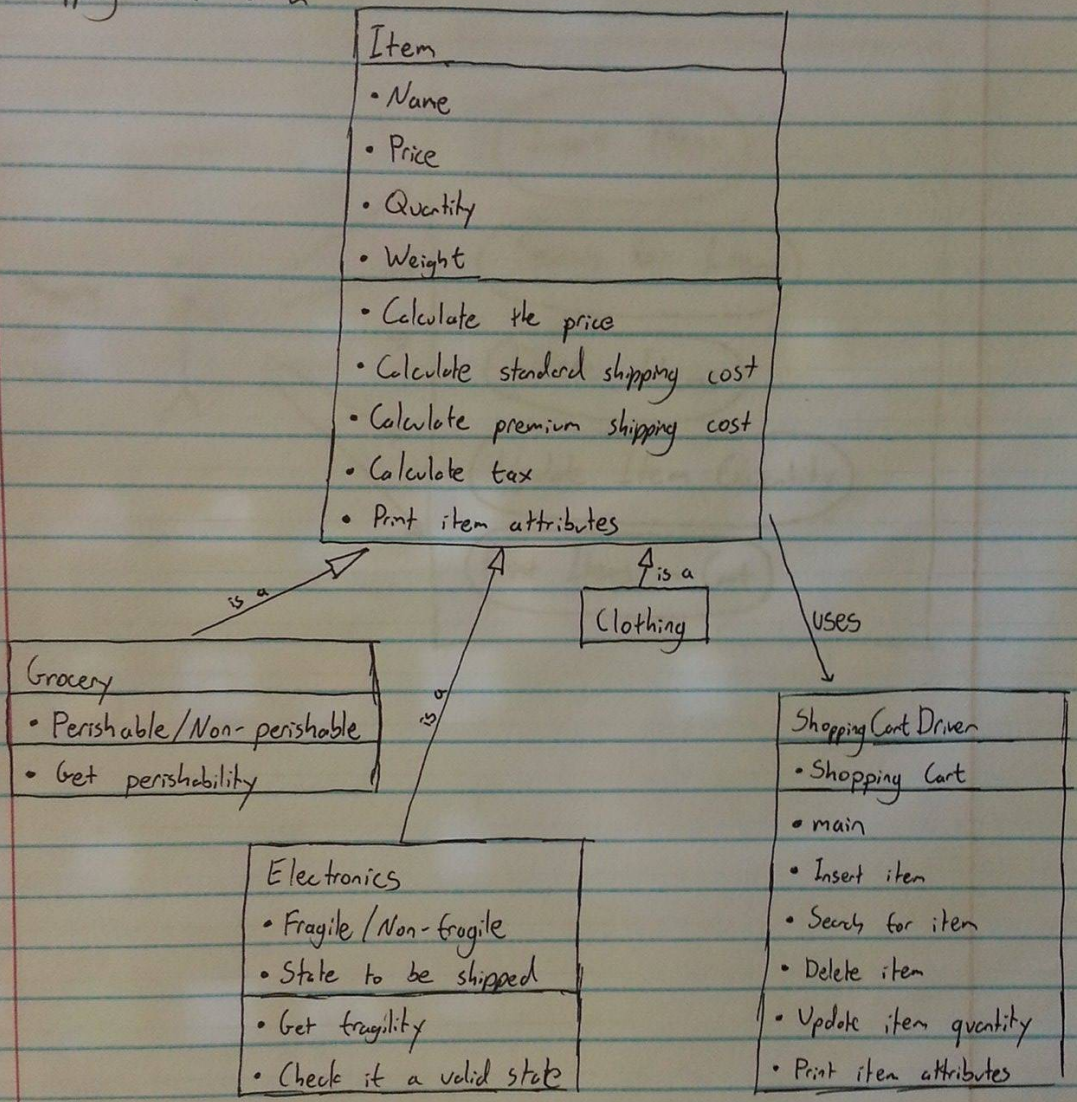
▸ Methods:
- calculatePrice()
  Pre: Item has a valid number for price.
  Post: returns price after calculations
- calculateTax (string state)
  Pre: state is a valid US state
  Post: calculates Tax based on the state.
  Parameters: state where object will be shipped

(Methods are very similar to the methods in Grocery class and Clothing class)

Algorithm (Driver method)



Shopping Cart Use Case



Shopping Cart UML