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CSC300

Program 2 - Design

**Class Declarations**

Class GroceryStack

*public variables*

* GroceryStack() – default constructor, sets top of stack pointer to null
* ~GroceryStack () – deconstructor
* void push(string, int, double) – inserts a list node at the top of the stack, accepts name, quantity, price.
* void pop(&string, &int, &double) – removes a list node from the top of the stack, accepts pointers to variables for popped elements to be stored
* void view() – displays contents of stack (more for debug than displaying total purchase values)

*private variables*

* struct StackNode – holds data values and pointer to next node
  + string – item name
  + int – item quantity
  + double – item cost
  + StackNode \*- pointer to next node
* StackNode \*head – points to the first node address

**Main**

int(main){

//read data from file

ingestData(); //reads file data into class structure

if(file read unsuccessful){

exit}

while (fileobject not end of file)

getline(elements to temporary structure)

Stack.push(push from temporary structure to stack)

//user menu

display menu to user and prompt for user selection

switch(user selected value)

case 1: printPrevious(stackSize);

prompt user for number of items to print

pop items off stack and print

case 2: printTotal(stackSize);

recursively pops items off stack and sums quantity\*cost

prints total

case 3: exit();

uses sentinel value to exit program

} while(exit case not selected)

}

