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1 // foj/1/estore/ESTore.java
2 //
3 //
4 // Copyright 2003 Bill Campbell and Ethan Bolker
5
6 /**
7  * An EStore object simulates the behavior of a simple on line
8  * shopping web site.
9
10 * It contains a Terminal object to model the customer's browser
11 * and several Item objects a customer can add to her ShoppingCart.
12
13 * @version 1
14 */
15
16 public class EStore
17 {
18     private String storeName = "Virtual Minimal Minimal";
19
20     // Use a Terminal object to communicate with customers.
21     private Terminal browser = new Terminal();
22
23     // The store stocks two kinds of Items.
24     private Item widget = new Item(10); // widgets cost $10
25     private Item gadget = new Item(13); // gadgets cost $13
26
27     private String selectionList = "(gadget, widget, checkout)";
28
29     /**
30      * Visit this EStore.
31
32      * Loop allowing visitor to select items to add to her
33      * ShoppingCart.
34      */
35     public void visit()
36     {
37         // Create a new, empty ShoppingCart.
38         ShoppingCart basket = new ShoppingCart();
39
40         // Print a friendly welcome message.
41         browser.println("Welcome to " + storeName );
42
43         // Change to false when customer is ready to leave:
44         boolean stillShopping = true;
45
46         while ( stillShopping ) {
47             Item nextPurchase = selectItem();
48             if ( nextPurchase == null ) {
49                 stillShopping = false;
50             }
51             else {
52                 basket.add( nextPurchase );
53             }
54         }
55         int numberPurchased = basket.getCount();
56

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57     int totalCost      = basket.getCost();
58     browser.println("We are shipping " + numberPurchased + " Items");
59     browser.println("and charging your account $" + totalCost);
60     browser.println("Thank you for shopping at " + storeName);
61 }
62
63 // Discover what the customer wants to do next:
64 // send browser a message to get customer input
65 // examine response to make a choice
66 // If response makes no sense give customer another chance
67
68 private Item selectItem()
69 {
70     String itemName =
71         browser.readWord("Item " + selectionList + " :");
72
73     if ( itemName.equals("widget") ) {
74         return widget;
75     }
76     else if ( itemName.equals("gadget") ) {
77         return gadget;
78     }
79     else if ( itemName.equals("checkout") ) {
80         return null;
81     }
82     else {
83         browser.println("No item named " +
84             itemName + "; try again" );
85         return selectItem(); // try again
86     }
87 }
88
89 /**
90  * The EStore simulation program begins here when the user
91  * issues the command <code>java EStore</code>.
92  */
93
94 public static void main( String[] args )
95 {
96     // Print this to simulate delay while browser finds store
97     System.out.println("connecting ...");
98
99     // Create the EStore object.
100    EStore website = new EStore();
101
102    // Visit it.
103    website.visit();
104 } // end of class EStore
105

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```
1 // fo1/l/estore/Item.java
2 //
3 //
4 // Copyright 2003 Bill Campbell and Ethan Bolker
5
6 /**
7  * An Item models an object that might be stocked in a store.
8  * Each Item has a cost.
9  *
10 * @version 1
11 */
12
13 public class Item
14 {
15     private int cost;
16
17     /**
18      * Construct an Item object.
19      *
20      * @param itemCost the cost of this Item.
21      */
22
23     public Item( int itemCost )
24     {
25         cost = itemCost;
26     }
27
28     /**
29      * How much does this Item cost?
30      *
31      * @return the cost.
32      */
33
34     public int getCost()
35     {
36         return cost;
37     }
38 }
```

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1 // fo1/l/estore/ShoppingCart.java
2 //
3 //
4 // Copyright 2003 Bill Campbell and Ethan Bolker
5
6 /**
7  * A ShoppingCart keeps track of a customer's purchases.
8  *
9  * @see EStore
10 * @version 1
11 */
12
13 public class ShoppingCart
14 {
15     private int count; // number of Items in this ShoppingCart
16     private int cost; // cost of Items in this ShoppingCart
17
18     /**
19      * Construct a new empty ShoppingCart.
20      */
21
22     public ShoppingCart()
23     {
24         count = 0;
25         cost = 0;
26     }
27
28     /**
29      * When this ShoppingCart is asked to add an Item to itself
30      * it updates its count field and then updates its cost
31      * field by sending the Item a getCost message.
32      *
33      * @param purchase the Item being added to this ShoppingCart.
34      */
35
36     public void add( Item purchase )
37     {
38         count++; // Java idiom for count = count + 1;
39         cost = cost + purchase.getCost();
40     }
41
42     /**
43      * What happens when this ShoppingCart is asked how many
44      * Items it contains.
45      *
46      * @return the count of Items.
47      */
48
49     public int getCount()
50     {
51         return count;
52     }
53
54     /**
55      * What happens when this ShoppingCart is asked the total
56      * cost of the Items it contains.

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57     *
58     * @return the total cost.
59     */
60     public int getCost()
61     {
62         return cost;
63     }
64 }
65 }

```