```java
1    package Assignment_7;
2
3    import java.util.*;
4    import BasicIO.*;
5    import static BasicIO.Formats.*;
6    import java.text.DecimalFormat;
7
8      // Shane Thomas
9     //5901368
10                                                                    */
11
12   public class NewHorizions {
13
14
15       private ASCIIDataFile    invData;      // data file for inventory info
16       private ASCIIPrompter    prompt;       // prompter for user input
17       private ASCIIOutputFile  newInvData;   // data file for updated inventory info
18       private ReportPrinter    report;       // printer for report
19       private BasicForm        display;
20
21       /** The constructor creates the basic form with a title and buttons.        */
22
23       public NewHorizions ( )
24       {
25           Item    item; //Item
26           String name; //Name
27           double cr; //Current amount
28           double pv; //Previous amount
29           double charge; //charge
30           double total;  // Total Charge
31
32           invData = new ASCIIDataFile();
33           prompt = new ASCIIPrompter();
34           newInvData = new ASCIIOutputFile();
35           report = new ReportPrinter();
36           display = new BasicForm();
37           setUpReport();
38           buildForm();
39           total = 0;
40
41           for ( ; ; )
42           {
43             item = new Item(invData);
44
45             if ( invData.isEOF() ) break;
46             {
47                 fillForm(item);
48                 display.accept();
49                 cr = display.readDouble("cr");
50                 pv = item.getPrevious();
51                 charge = item.charge(cr);
52                 name = item.getName();
53                 writeDetail(item,pv,cr);
54                 item.write(newInvData);
55                 total+=charge;
56             }
57
58           };
59
60           total = Math.round(total*100)/100.0; // This makes the number round to two
     decimal places
61           writeSummary(total);
62           display.close();
63           invData.close();
64           newInvData.close();
65           prompt.close();
66           report.close();
67
68       };  // constructor
69
70
71       private void buildForm()
72       {
73         display.addTextField("itemNum","Account #",6,10,10);
74         display.setEditable("itemNum",false);
75         display.addTextField("name","Name",16,10,40);
```

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76        display.setEditable("name",false);
77        display.addTextField("pv","Previous Reading",5,10,70);
78        display.setEditable("pv",false);
79        display.addTextField("cr","Current Reading",5,10,100);
80      } //buildForm
81
82      private void fillForm(Item item)
83      {
84        display.writeString("itemNum",item.getAccountNum());
85        display.writeString("name",item.getName());
86        display.writeDouble("pv",item.getPrevious());
87        display.clear("cr");
88      } //fillForm
89
90      private void writeDetail ( Item item, double pv,double cr )
91      {
92          report.writeString("acnt",item.getAccountNum());
93          report.writeString("name",item.getName());
94          report.writeDouble("pv",pv);
95          report.writeDouble("cr",cr);
96          report.writeDouble("charge",item.getPrevious());
97
98      }; //writeDetail
99
100     private void writeSummary ( double total )
101     {
102       report.writeLine("Total Billed: $"+total);
103     };   // writeSummary
104
105     private void writeInvData ( Item item )
106     {
107         newInvData.writeString(item.getAccountNum());
108         newInvData.writeString(item.getName());
109         newInvData.writeDouble(item.getPrevious());
110         newInvData.newLine();
111
112     };   // writeInvData
113
114     private void setUpReport()
115     {
116       report.setTitle("Over the Horizon Utilities", "Billing Report");
117       report.addField("acnt", "Account #",9);
118       report.addField("name", "Name",20);
119       report.addField("pv", "Previous",8);
120       report.addField("cr", "Current",10);
121       report.addField("charge", "Charge",8);
122     } //setUpReport
123
124     public static void main ( String[] args ) { NewHorizions i = new NewHorizions(); };
125
126
127 } //  NewHorizions
```