```cpp
/*****************************************************************************
 * AUTHOR       : Saul Moreno
 * STUDENT ID   : 269491
 * ASSIGNMENT # : 3
 * CLASS        : CS1C
 * SECTION      : MW 5:00pm
 * DUE DATE     : 2/12/19
 *****************************************************************************/

#include "header.h"

/*****************************************************************************
 * Pointer
 * ---------------------------------------------------------------------------
 * This program will show the user the amount of items in stock and their cost
 * and subtract from the inventory then add up the cost before and after tax.
 *****************************************************************************/
struct Inventory
{
    std::string equipmentName;  // The name of the equipment
    double cost;                // The cost of the equipment
    int    quantity;            // The quantity in the inventory

};

namespace variable
{
    const int PROMPT_COL  = 50; // Column size for the cout
    const int RECEIPT_COL = 22; // Column size for the receipt
    const int INV_COL     = 32; // Column size for the inventory
    const int PRICE_COL   = 7;  // Column size for the price
    int basketShoesAmount; // The # of Nike shoes being bought
    int tShirtAmount;      // The # of T-shirt being bought
    int brooksAmount;      // The # of Brooks shoes being bought
    int asicsAmount;       // The # of Asics shoes being bought
    int shortAmount;       // The # of shorts being bought
    int basketInv;         // Holds the amount of Nike shoes in the inventory
    int tShirtInv;         // Holds the amount of T-shirts in the inventory
    int brooksInv;         // Holds the amount of Brooks shoes in the inventory
    int asicsInv;          // Holds the amount of Asics shoes in the inventory
    int shortInv;          // Holds the amount of shorts in the inventory
    double basketCost;     // Holds the price of Nike shoes
    double tShirtCost;     // Holds the price of
    double brooksCost;     // Holds the price of Brooks shoes
    double asicsCost;      // Holds the price of Asics shoes
    double shortCost;      // Holds the price of shorts
    double amtBeforeTax;   // Holds the amount of the sale before tax
    double tax;            // Tax % being charged; 7.75.
    double taxAmount;      // Stores the amount that was taxed
    double amtAfterTax;    // The total value after tax
}

int main()
{

    Inventory inventory[5]; // Creates an array that holds 5 elements
    variable::tax = 7.75;   // initializing the tax amount
```

```
58
59      //Calls the function to print out the author box
60      PrintHeader("Pointer", 3, 'A');
61
62      std::cout << "This program will show the items available for purchase\n"
63                << "and how many are in stock. Then after the user has\n"
64                << "selected how many they want the program will add up\n"
65                << "their total before and after tax\n\n";
66
67      inventory[0].equipmentName = "Nike basketball shoes";
68      inventory[0].cost = 179.99;
69      inventory[0].quantity = 25;
70      inventory[1].equipmentName = "Under Armour T-shirt";
71      inventory[1].cost = 29.99;
72      inventory[1].quantity = 88;
73      inventory[2].equipmentName = "Brooks running shoes";
74      inventory[2].cost = 121.44;
75      inventory[2].quantity = 13;
76      inventory[3].equipmentName = "Asics running shoes";
77      inventory[3].cost = 165.88;
78      inventory[3].quantity = 12;
79      inventory[4].equipmentName = "Under Armour shorts";
80      inventory[4].cost = 45.77;
81      inventory[4].quantity = 35;
82
83      std::cout << std::left;
84      std::cout << std::setw(variable::RECEIPT_COL) << "Name of Equipment"
85                << std::setw(variable::PRICE_COL) << "Cost" << "Quantity\n";
86      for(int count = 0; count < 5; count++)
87      {
88          std::cout << std::setw(variable::RECEIPT_COL)
89                    << inventory[count].equipmentName
90                    << std::setw(variable::PRICE_COL)
91                    << inventory[count].cost << " "
92                    << inventory[count].quantity << std::endl;
93      }// end for(int count = 0; count < 5; count++)
94
95      std::cout << std::endl;
96      std::cout << std::setw(variable::PROMPT_COL)
97                << "Enter how many Nike basketball shoes do you want? ";
98      std::cin  >> variable::basketShoesAmount;
99
100     std::cout << std::setw(variable::PROMPT_COL)
101               << "Enter how many Under Armour T-shirts do you want? ";
102     std::cin  >> variable::tShirtAmount;
103
104     std::cout << std::setw(variable::PROMPT_COL)
105               << "Enter how many Brooks shoes do you want? ";
106     std::cin  >> variable::brooksAmount;
107
108     std::cout << std::setw(variable::PROMPT_COL)
109               << "Enter how many Asics running shoes do you want? ";
110     std::cin  >> variable::asicsAmount;
111
112     std::cout << std::setw(variable::PROMPT_COL)
113               << "Enter how many Under Armour shorts do you want? ";
114     std::cin  >> variable::shortAmount;
```

```
115     std::cin.ignore(1000, '\n');
116
117     std::cout << std::endl;
118     variable::basketInv = inventory[0].quantity - variable::basketShoesAmount;
119     variable::basketCost = inventory[0].cost * variable::basketShoesAmount;
120     inventory[0].quantity = variable::basketInv;
121     std::cout << std::setw(variable::INV_COL)<< "Nike shoes left in inventory:"
122               << inventory[0].quantity << std::endl;
123
124     variable::tShirtInv = inventory[1].quantity - variable::tShirtAmount;
125     variable::tShirtCost = inventory[1].cost * variable::tShirtAmount;
126     inventory[1].quantity = variable::tShirtInv;
127     std::cout << std::setw(variable::INV_COL) << "T-Shirts left in inventory:"
128               << inventory[1].quantity << std::endl;
129
130     variable::brooksInv = inventory[2].quantity - variable::brooksAmount;
131     variable::brooksCost = inventory[2].cost * variable::brooksAmount;
132     inventory[2].quantity = variable::brooksInv;
133     std::cout << std::setw(variable::INV_COL)
134               << "Brooks shoes left in inventory:" << inventory[2].quantity
135               << std::endl;
136
137     variable::asicsInv = inventory[3].quantity - variable::asicsAmount;
138     variable::asicsCost = inventory[3].cost * variable::asicsAmount;
139     inventory[3].quantity = variable::asicsInv;
140     std::cout << std::setw(variable::INV_COL)
141               << "Asics shoes left in inventory:" << inventory[3].quantity
142               << std::endl;
143
144     variable::shortInv = inventory[4].quantity - variable::shortAmount;
145     variable::shortCost = inventory[4].cost * variable::shortAmount;
146     inventory[4].quantity = variable::shortInv;
147     std::cout << std::setw(variable::INV_COL) << "Shorts left in inventory:"
148               << inventory[4].quantity << std::endl;
149
150     std::cout << std::endl;
151     std::cout << "Receipt\n";
152     std::cout << std::setw(variable::RECEIPT_COL) << "Nike Shoes"
153               <<  "x" << std::fixed << std::setprecision(2)
154               << variable::basketShoesAmount
155               << " = " << variable::basketCost << std::endl;
156     std::cout << std::setw(variable::RECEIPT_COL) << "Under Armour T-shirts"
157               << "x" << std::fixed << std::setprecision(2)
158               << variable::tShirtAmount
159               << " = " << variable::tShirtCost << std::endl;
160     std::cout << std::setw(variable::RECEIPT_COL) << "Brooks shoes"
161               <<  "x" << std::fixed << std::setprecision(2)
162               << variable::brooksAmount
163               << " = " << variable::brooksCost << std::endl;
164     std::cout << std::setw(variable::RECEIPT_COL)<< "Asics shoes"
165               <<  "x" << std::fixed << std::setprecision(2)
166               << variable::asicsAmount
167               << " = " << variable::asicsCost << std::endl;
168     std::cout << std::setw(variable::RECEIPT_COL) << "Under Armour shorts"
169               <<  "x" << std::fixed << std::setprecision(2)
170               << variable::shortAmount
171               << " = " << variable::shortCost << std::endl;
```

```
172
173     variable::amtBeforeTax = variable::basketCost + variable::tShirtCost
174                              + variable::brooksCost + variable::asicsCost
175                              + variable::shortCost;
176
177
178     std::cout << std::endl;
179     std::cout << std::setw(variable::RECEIPT_COL) << "Amount before tax: "
180               << std::fixed << std::setprecision(2) << variable::amtBeforeTax
181               << std::endl;
182     variable::taxAmount = (variable::amtBeforeTax * variable::tax) / 100;
183     std::cout << std::setw(variable::RECEIPT_COL) << "Tax: "
184               << std::fixed << std::setprecision(2) << variable::taxAmount
185               << std::endl;
186     variable::amtAfterTax = variable::amtBeforeTax + variable::taxAmount;
187     std::cout << std::setw(variable::RECEIPT_COL) << "Amount after tax: "
188               << std::fixed << std::setprecision(2) << variable::amtAfterTax
189               << std::endl;
190     std::cout << std::right;
191
192     return 0;
193 }
194
```