Assignment_4 56053 – Karan Dubey

A common place to buy candy is from a machine. The machine sells candies, chips, gum, and cookies. You
have been asked to write a program for this candy machine.
The program should do the following:
1. Show the customer the different products sold by the candy machine.
2. Let the customer make the selection.
3. Show the customer the cost of the item selected.
4. Accept money from the customer.
5. Release the item.
The machine has two main components: a built-in cash register and several dispensers to hold and release
the products.
Define class cashRegister in C++ with the following descriptions :
Private Members:
cashOnHand of type integer
Public Members:
A default constructor cashRegister() sets the cash in the register to 500.
A constructor cashRegister(int) sets the cash in the register to a specific amount.
A function getCurrentBalance() which returns value of cashOnHand
A function acceptAmount(int) to receive the amount deposited by the customer and update the amount in
the register
Define class dispenserType in C++ with the following descriptions :
Private Members:
numberOfItems of type integer
cost of type integer
Public Members:
A default constructor dispenserType () sets the cost and number of items in the dispenser to 50 each.
A constructor dispenserType (int,int) sets the cost and number of items in the dispenser to the values specified by the user.
A function getNoOfItems() to return the value of numberOfItems.
A function getCost() to return the value of cost.
A function makeSale() to reduce the number of items by 1.
When the program executes, it must do the following:
1. Show the different products sold by the candy machine.
2. Show how to select a particular product.Once the user has made the appropriate selection, the candy machine must act accordingly. If the user has
opted to buy a product and that product is available, the candy machine should show the cost of the product

and ask the user to deposit the money. If the amount deposited is at least the cost of the item, the candy
machine should sell the item and display an appropriate message.
Divide this program into three functions: showSelection, sellProduct, and main.
The function sellProduct must have access to the dispenser holding the product (to decrement the number
of items in the dispenser by 1 and to show the cost of the item) as well as the cash register (to update the
cash). Therefore, this function has two parameters: one corresponding to the dispenser and the other corresponding to the cash register.

Code-

Terminal

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```
#include <iostream>
using namespace std;

class cashregister
{
    private:
    int cashonhand;

     public:

    cashregister()
     {

         cashonhand = 500;
    }

  cashregister(int amount){
         cashonhand = amount;
    }


       int getcurrntbal() {
        return cashonhand;
    }
 void acceptamount(int amnt)
       {
        cashonhand += amnt;
    }

};
```

```
31
32 class dispensertype {
33     private:
34     int numofitems;
35     int cost;
36
37      public:
38
39     dispensertype()
40         {
41         numofitems = 50;
42         cost = 50;
43     }
44
45
46          dispensertype(int items, int price)
47           {
48         numofitems = items;
49         cost = price;
50     }
51
52
53
54     int getnumitems() {
55         return numofitems;
56     }
57      void makesale() {
58         numofitems--;
```

```
    }

    int get_cost() {
        return cost;
    }


};

void showselect() {

    cout << endl<<"candy machine menu"<<endl;

    cout << "1 Candy"<<endl;

    cout << "2 Chips"<<endl;

    cout << "3 Gum"<<endl;

    cout << "4 Cookies"<<endl;

    cout << "enter ur choice"<<endl;   }


void sellproduct(dispensertype &item, cashregister & regg) {

    if (item.getnumitems() <= 0) {
        cout << "sold out."<<endl;
        return;
    }

     int money;
    cout << "cost" << item.get_cost() << endl;
      cout << "insert money ";
    cin >> money;

    if (money < item.get_cost()) {
        cout << "not enough money. item not sold."<<endl;
    }

    else {

        item.makesale();
```

```
103
104         regg.acceptamount(item.get_cost());
105
106         cout << "Please collect your item."<<endl;
107
108         if (money > item.get_cost()){
109             cout << "change returned " << money - item.get_cost() << endl;
110         }
111
112     }
113 }
114
115 int main() {
116     cashregister r1;
117
118     dispensertype candy(20, 10);
119     dispensertype chips(15, 20);
120     dispensertype gum(30, 5);
121     dispensertype cookies(10, 25);
122
123     int choice;
124     showselect();
125     cin >> choice;
126
126
127     switch (choice) {
128         case 1:
129          sellproduct(candy, r1);
130           break;
131         case 2:
132          sellproduct(chips, r1);
133          break;
134         case 3:
135         sellproduct(gum, r1);
136          break;
137         case 4:
138          sellproduct(cookies, r1);
139           break;
140         default:
141          cout << "invalid choice"<<endl;
142     }
143
144     return 0;
145 }
```