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/// Comp 200 -- Spring 23

/// Classes Assignment

#include <iostream>

#include <iomanip>

#include <vector>

using namespace std;

// Please complete problem 9.22.6 in the prorgramming projects section of your text.

/\* Reimplement the CashRegister class so that it keeps track of

\* the price of each added item in a vector<double>.

\* Remove the item\_count and total\_price data members.

\* Reimplement the clear, add\_item, get\_total,

\* and get\_count member functions.

\* Add a member function display\_all that displays the

\* prices of all items in the current sale. \*/

class CashRegister {

public:

CashRegister();

void clear();

void add\_item(double item);

double get\_total() const;

int get\_count() const;

void display\_all() const;

private:

vector<double> items;

};

// Default constructor that produces an empty vector

CashRegister::CashRegister() {

this->items.clear();

}

// Empties the items vector

void CashRegister::clear() {

this->items.clear();

}

// Adds an item to the items vector

void CashRegister::add\_item(double item) {

this->items.push\_back(item);

}

// Adds up the contents of the items vector and returns the total

double CashRegister::get\_total() const {

double total = 0;

for (unsigned int i = 0; i < this->items.size(); i++) {

total += items.at(i);

}

return total;

}

// Returns the numbers of items in the vector

int CashRegister::get\_count() const {

return this->items.size();

}

// Displays an itemized total of the entire vector with the total

void CashRegister::display\_all() const {

cout << setfill('\*') << setw(12) << "Total";

cout << setfill('\*') << setw(7) << "" << endl;

for (unsigned int i = 0; i < this->items.size(); i++) {

cout << "\*" << setw(2) << setfill(' ') << ' ' << i + 1 << ": ";

cout << this->items.at(i) << "\t \*" << endl;

}

cout << "\* Total: " << this->get\_total() << "\t \*" << endl;

cout << setfill('\*') << setw(19) << "" << endl;

cout << endl;

}

int main() {

cout << fixed << setprecision(2);

CashRegister cart;

char selection;

double item;

cout << "Add item to cart" << endl;

cin >> item;

cart.add\_item(item);

cout << "Add more items? press q to quit" << endl;

cout << "a -- add item" << endl;

cout << "d -- display total" << endl;

cout << "e -- clear cart" << endl;

cin >> selection;

while (selection != 'q') {

if (selection == 'a') {

cin >> item;

cart.add\_item(item);

} else if (selection == 'd') {

cart.display\_all();

} else if (selection == 'e') {

cart.clear();

} else {

cout << "Make a selection" << endl;

}

cout << "Add more items? press q to quit" << endl;

cout << "a -- add item" << endl;

cout << "d -- display total" << endl;

cout << "e -- clear cart" << endl;

cin >> selection;

cout << endl;

}

cart.display\_all();

return 0;

}



