#include <iostream.h>
#include <iomanip.h>
#include "DigitalTimer.h"

void countUp(digitalTimer& w, int t) { //This function counts up for t seconds.
    cout << endl;
    for (int i = 1; i <= t; i++) {
        for (int j = 1; j <= 10000000; j++); //creates the illusion of passing time
            w.increment();
            w.showTime();
    }
}

void countDown(digitalTimer& w, int t) { //This function counts down for t seconds.
    cout << endl;
    for (int i = 1; i <= t; i++) {
        for (int j = 1; j <= 10000000; j++); //creates the illusion of passing time
            w.decrement();
            w.showTime();
    }
}

void getChoice(int& c) { //This function prompts the user for a choice from the menu.
    cout << "\nPlease input a choice: ";
    cin >> c;
}

void showMenu() { //This function displays a menu for the user.
    cout << "\n  1:  Set time" << endl;
    cout << "  2:  Show time" << endl;
    cout << "  3:  Change seconds" << endl;
    cout << "  4:  Change minutes" << endl;
    cout << "  5:  Change hours" << endl;
    cout << "  6:  Count up" << endl;
    cout << "  7:  Count down" << endl;
    cout << "  8:  Exit digital timer" << endl;
}

void main() {
    int choice, secs, mins, hrs, ticks; //user choice, seconds, minutes, hours, watch ticks
    digitalTimer watch = digitalTimer(0,0,0); //digital watch
    cout << "*****Welcome to the digital timer*****" << endl;
    do {
        showMenu();
        getChoice(choice);
        switch(choice) {
            case 1: cout << "\nPlease input seconds: ";
                    cin >> secs;
                    watch.changeSeconds(secs);
                    break;
            case 2: cout << "\nPlease input minutes: ";
                    cin >> mins;
                    watch.changeMinutes(mins);
                    break;
            case 3: cout << "\nPlease input hours: ";
                    cin >> hrs;
                    watch.changeHours(hrs);
                    break;
            case 4: cout << "\nPlease input new seconds: ";
                    cin >> secs;
                    watch.changeSeconds(secs);
                    break;
            case 5: cout << "\nPlease input new minutes: ";
                    cin >> mins;
                    watch.changeMinutes(mins);
                    break;
            case 6: cout << "\nPlease input new hours: ";
                    cin >> hrs;
                    watch.changeHours(hrs);
                    break;
            case 7: cout << "\nPlease input new seconds: ";
                    cin >> secs;
                    watch.changeSeconds(secs);
                    break;
            case 8: cout << "\nPlease input new minutes: ";
                    cin >> mins;
                    watch.changeMinutes(mins);
                    break;
            case 9: cout << "\nPlease input new hours: ";
                    cin >> hrs;
                    watch.changeHours(hrs);
                    break;
            case 0: cout << "\nExiting digital timer" << endl;
                    break;
        }
    } while (choice != 0); //repeat until user exits
watch.changeSeconds(secs); break;
case 4: cout << "\nPlease input new minutes: ";
cin >> mins;
watch.changeMinutes(mins); break;
case 5: cout << "\nPlease input new hours: ";
cin >> hrs;
watch.changeHours(hrs); break;
case 6: cout << "\nPlease input number of seconds to increment: ";
cin >> ticks;
countUp(watch, ticks); break;
case 7: cout << "\nPlease input the number of seconds to decrement: ";
cin >> ticks;
countDown(watch, ticks); break;
case 8: cout << "\nGoodbye." << endl; break;
} while (choice != 8);