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

ostream& operator<<(ostream& os, digitalTimer w) {
    w.showTime();
    return os;
}

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 <= 50000000; j++);        //creates the illusion
            //of passing time
            w++;
            cout << w;
    }
}

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 <= 50000000; j++);        //creates the illusion
            //of passing time
            w--;
            cout << w;
    }
}

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,  //user choice
        secs,   //seconds
        mins,   //minutes
        hrs,    //hours
        ticks;  //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;
            cout << "Please input minutes: ";
            cin >> mins;
            cout << "Please input hours: ";
            cin >> hrs;
            watch.changeSeconds(secs);
            break;
        case 2:
            watch.showTime();
            break;
        case 3:
            watch.changeSeconds(secs);
            break;
        case 4:
            watch.changeMinutes(mins);
            break;
        case 5:
            watch.changeHours(hrs);
            break;
        case 6:
            watch.countUp();
            break;
        case 7:
            watch.countDown();
            break;
        case 8:
            return;
    }
} while (true);

watch.changeMinutes(mins);
    watch.changeHours(hrs);
    break;
    case 2: cout << endl << watch;                 break;
    case 3: cout << "\nPlease input new seconds: ";
            cin >> secs;
            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);
    }