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// Attached: hw3

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// HW 3

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// CS 1B

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#include <iostream>

#include <iomanip>

#include <string>

#include <cmath>

using namespace std;

struct Time

{

int hours;

int minutes;

int seconds;

};

void getTime(Time time);

bool istimevalid(Time time);

void addonesec(Time time, int MAX\_HOURS, int MAX\_MINS, int MAX\_SECS);

void displaytime(Time time);

int main()

{

Time time = { 0,0,0 };

int MAX\_HOURS = 23;

int MAX\_MINS = 59;

int MAX\_SECS = 59;

getTime(time);

istimevalid(time);

addonesec(time, MAX\_SECS, MAX\_MINS, MAX\_SECS);

displaytime(time);

system("pause>null");

return 0;

}

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void getTime(Time time)

{

cout << "Enter the time in military time, (24-hour format),in the following order : HH:MM:SS, (Hours, Minutes, Seconds)" << endl;

cout << "Hours : ";

cin >> time.hours;

cout << " " << endl;

cout << "Minutes: ";

cin >> time.minutes;

cout << " " << endl;

cout << "Seconds: ";

cin >> time.seconds;

cout << " " << endl;

}

//=================================================================

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bool istimevalid(Time time)

{

int MAX\_HOURS = 23;

int MAX\_MINS = 59;

int MAX\_SECS = 59;

if ((time.hours >= 0) && (time.hours <= MAX\_HOURS) && (time.minutes >= 0) && (time.minutes <= MAX\_MINS) && (time.minutes >= 0) && (time.minutes <= MAX\_MINS) && (time.seconds >= 0) && (time.seconds <= MAX\_SECS))

{

return true;

}

else

{

cout << "invalid time.";

return false;

}

}

//=================================================================

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void addonesec(Time time, int MAX\_HOURS, int MAX\_MINS, int MAX\_SECS)

{

time.seconds++;

if (time.seconds > MAX\_SECS)

{

time.seconds = 0;

time.minutes++;

}

if (time.minutes > MAX\_MINS)

{

time.minutes = 0;

time.hours++;

}

if (time.hours > MAX\_HOURS)

{

time.hours = 0;

time.seconds++;

}

}

//=================================================================

//=================================================================

void displaytime(Time time)

{

cout << setw(2);

cout.fill();

cout << time.hours;

cout << setw(2);

cout.fill();

cout << time.minutes;

cout << setw(2);

cout.fill();

cout << time.seconds;

}