Lab exercise 5

1. **The user enters today's date, please calculates tomorrow's date, and display the results. You can use the struct as below.**

```
struct date
{ int month;
  int day;
  int year;
};
```

Hint: there are two special cases. 1. If today's date falls at the end of a month; 2. If today's date falls at the end of a year. Therefore, you can set up an array of integer that corresponds to the number of days in each month.

```
int daysPerMonth[12] = {31 ,28, 31, 30, 31, 30, 31, 31, 31, 30, 31, 30, 31}
```

For a simple case, the leap year is not considered here.

2. **Update the time by one second. Complete the program as below. The output is like：**

```
Enter the time (hh:mm:ss): 23:12:59
Updated time is 23:13:00
```

```
#include <stdio.h>
struct time
{
int hour;
int minutes;
int seconds;
};

// Function to update the time by one second
struct time timeUpdate (struct time now)
{
  // write your code here
}

int main (void)
{
struct time timeUpdate (struct time now);
struct time currentTime, nextTime;
printf ("Enter the time (hh:mm:ss): ");
```

```
    scanf ("%i:%i:%i", &currentTime.hour, &currentTime.minutes,
    &currentTime.seconds);
    nextTime = timeUpdate (currentTime);
    printf ("Updated time is %.2i:%.2i:%.2i\n", nextTime.hour,
    nextTime.minutes, nextTime.seconds );
    return 0;
}
```

3. **Write a function elapsed_time that takes as its arguments two time structures and returns a time structure that represents the elapsed time (in hours, minutes, and seconds) between the two times. So the call elapsed_time (time1, time2) where time1 represents 3:45:15 and time2 represents 9:44:03, should return a time structure that represents 5 hours, 58 minutes, and 48 seconds. Be careful with times that cross midnight.**