lab03

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1  // EE231002 Lab03. Day of the Year and Day of the week
2  // 108061112, 林靖
3  // Sep. 30, 2019
4
5  #include <stdio.h>                      // standard input and output library
6
7  int main(void)                          // the main function
8  {
9      int year, month, day;               // variables storing the inputs
10     int totalDays;                      // total Gregorian calendar days
11     int dayOfYear;                      // the days passed in this year
12     int dayOfWeek;                      // the day of the week
13
14     printf("Enter a date (y/m/d): ");                   // prompt for date
15     scanf("%d/%d/%d", &year, &month, &day);             // read the input
16
17
18
       Why these blank lines?
19
20
21                     // here start calculating the days passed in this year:
22
23     dayOfYear = day;         // first accumulate the days passed this month
24     switch (month) {         // then accumulate the days of each month passed
25         case 12:
26             dayOfYear += 30;            // to accumulate the days in Nov.
27         case 11:
28             dayOfYear += 31;            // to accumulate the days in Oct.
29         case 10:
30             dayOfYear += 30;            // to accumulate the days in Sep.
31         case 9:
32             dayOfYear += 31;            // to accumulate the days in Aug.
33         case 8:
34             dayOfYear += 31;            // to accumulate the days in Jul.
35         case 7:
36             dayOfYear += 30;            // to accumulate the days in Jun.
37         case 6:
38             dayOfYear += 31;            // to accumulate the days in May.
39         case 5:
40             dayOfYear += 30;            // to accumulate the days in Apr.
41         case 4:
42             dayOfYear += 31;            // to accumulate the days in Mar.
43         case 3:
44             dayOfYear += 28;            // to accumulate the days in Feb.
45
46             if ((0 == year % 4 && 0 != year % 100) || 0 == year % 400) {
47                                         // here check if it's a leap year
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48                  ++dayOfYear;            // plus the extra day in Feb.
49              }
50
51          case 2:
52              dayOfYear += 31;            // to accumulate the days in Jan.
53      }
54                      // here end of calculating the days passed in this year
55
56
57
58
59                      // here start calculating total Gregorian calendar days:
60      --year;                             // first ignore the days in this year
61      totalDays = year * 365;             // there are at least 365 days in a year
62      totalDays += year / 4;              // leap years occur mostly every 4 years
63      totalDays -= year / 100;            // skip a leep year every 100 year
64      totalDays += year / 400;            // unless the year is divisible by 400
65      totalDays += dayOfYear;             // plus the days passed in this year
66
67      dayOfWeek = totalDays % 7;          // here calculate the day of the week
68
69                                          // here end of all the calculating
70
71
72
73
74
75                                          // here start printing out the results:
76
77      printf("Total Gregorian Calendar days: %d\n", totalDays);
78                                          // total number of days from 1/1/1
79
80      printf("Day of year: %d\n", dayOfYear);
81                                          // days passed in this year
82
83      printf("Day of week: ");            // start printing out the day of week:
84      switch (dayOfWeek) {                // to find the English word corresponded
85          case 6:                         // if the remainder is 6
86              printf("Saturday");         // the corresponded word is "Saturday"
87              break;
88          case 5:                         // if the remainder is 5
89              printf("Friday");           // the corresponded word is "Friday"
90              break;
91          case 4:                         // if the remainder is 4
92              printf("Thursday");         // the corresponded word is "Thursday"
93              break;
94          case 3:                         // if the remainder is 3
95              printf("Wednesday");        // the corresponded word is "Wednesday"
96              break;
97          case 2:                         // if the remainder is 2
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 98             printf("Tuesday");      // the corresponded word is "Tuesday"
 99             break;
100         case 1:                     // if the remainder is 1
101             printf("Monday");       // the corresponded word is "Monday"
102             break;
103         case 0:                     // if the remainder is 0
104             printf("Sunday");       // the corresponded word is "Sunday"
105     }
106     printf("\n");                   // new line
107                                     // here end of all the printing out
108
109
110
111     return 0;                       // indicate normal program termination
112 }
113
```

[Format] can be improved.
[Format] extra blank lines can be removed.
[Coding] lab03.c spelling errors: leep(1)

Score: 96