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1 /* EE2310 Lab04. Calender of the Month
2    107061112, 王昊文
3    Date: 2018.10.05
4 */
5 #include <stdio.h>           // include standard library
6
7 int main(void)               // main program starts
8 {
9     /* m as input month, i as the counter to find the first day,
10    startDay as the first day, date as the print out date */
11    int m, i, startDay, date;
12    // Can insert a blank line here.
13    printf("Input a month of 2018: "); // prompt
14    scanf("%d", &m);
15    if (m >= 1 && m <= 12) {        // restriction
16        printf("    ");             // blank of the calender
17        switch (m) {                // find out the month
18            case 1: printf("January");
19                break;
20            case 2: printf("February");
21                break;
22            case 3: printf("March");
23                break;
24            case 4: printf("April");
25                break;
26            case 5: printf("May");
27                break;
28            case 6: printf("June");
29                break;
30            case 7: printf("July");
31                break;
32            case 8: printf("August");
33                break;
34            case 9: printf("September");
35                break;
36            case 10: printf("October");
37                break;
38            case 11: printf("November");
39                break;
40            case 12: printf("December");
41                break;
42        }
43    }
44    printf(" 2018\n");              // format of the calender
45    printf("    Sun Mon Tue Wed Thu Fri Sat\n");
46    /* find out the first day of a Month, startDay starts at

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44     2 because January starts at Monday (Saturday as 7,
45     Sunday as 1) */
46     for (i = 1, startDay = 2; i < m; i++) {
47         // Month with 31 days
48         if (i == 1 || i == 3 || i == 5 || i == 7 || i == 8 || \
49             i == 10 || i == 12) {
50             i == 10 || i == 12) { // Indentation.
51                 startDay += 31 % 7;    // remainder = start day of a month
52                 if (startDay > 7)
53                     startDay -= 7;          // startDay < 7
54             }
55         // Month with 30 days
56         else if (i == 4 || i == 6 || i == 9 || i == 11) {
57             startDay += 30 % 7;
58             if (startDay > 7)
59                 startDay -= 7;
60         }
61     switch (startDay) {    // print the blanks with respect to startDay
62         case 1: printf ("    ");
63             break;
64         case 2: printf ("      ");
65             break;
66         case 3: printf ("        ");
67             break;
68         case 4: printf ("          ");
69             break;
70         case 5: printf ("            ");
71             break;
72         case 6: printf ("              ");
73             break;
74         case 7: printf ("                ");
75     }
76     // Can use a loop to do this.
77     // month with 31 days
78     if (m == 1 || m == 3 || m == 5 || m == 7 || m == 8 || m == 10 \
79         || m == 12) {
80         for (date = 1; date <= 31; date++) {    // print out dates of a mont
81             printf("%2d ", date);
82             if (startDay++ % 7 == 0)            // if it is Saturday, print \n
83                 printf("\n    ");
84         }
85     }

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85     // month with 30 days
86     else if (m == 4 || m == 6 || m == 9 || m == 11) {
87         for (date = 1; date <= 30; date++) { // print out dates of a mont
h
88             printf("%2d ", date);
89             if (startDay++ % 7 == 0) // if it is Saturday, print \n
90                 printf("\n    ");
91         }
92     }
93     else if (m == 2) { // February is a special case
94         for (date = 1; date <= 28; date++) { // print out dates of a mont
h
95             printf("%2d ", date);
96             if (startDay++ % 7 == 0) // if it is Saturday, print \n
97                 printf("\n    ");
98         }
99     }
100     printf("\n");
    printf("\n"); // Indentation.
101 }
102 else // if the number is out of range, print error
103     printf("    Input error, program aborts!\n");
104 return 0;
105 }

```

// March output has an extra line at the end.

// Program logic can be simplified.

Score: 87