Diffchecker

- 62 Removals   + 46 Additions

11.1.c

Left side:

```
1   #include <stdio.h>
2
3   typedef enum {false, true} bool;
4
5   bool leap(int year)
6   {
7           if(year%400 == 0){return true;}
8           else if(year%100 == 0){return false;}
9           else if(year%4 == 0){return true;}
10          else {return false;}
11  }
12
13  int dayOfYear(int day, int month, int year)
14  {
15          int sum = 0;
16          bool last = true;
17          if (year < 1753) {return -1;}
18          else if (!(1<=month && month<=12)) {return -1;}
19          else
20          {
21                  switch(month)
22                  {
23                          case 12:
24                          {
25                                  if(1<=day && day<=31){sum = sum + day;}
26                                  else {return -1;}
27                                  last = false;
28                                  day = 15; //Safe number as it is counted later
29                          }
30                          case 11:
31                          {
32                                  if(1<= day && day <=30)
33                                  {
34                                          if(last)
35                                          {
36                                                  sum = sum + day;
37                                                  last = false;
38                                                  day = 15;
39                                          }
40                                          else {sum = sum +
```

Right side:

```
1   #include <stdio.h>
2
3   typedef enum {false, true} bool;
4
5   // Check if year is leap
6   bool leap(int year)
7   {
8           return (year % 400 == 0) || ((year % 4 == 0) && (year % 100 != 0));
9   }
10
11  // Check if the day is valid
12  bool validDay(int day, int min, int max){
13      return min <= day && day <= max;
14  }
15
16  // Here we check the day of the year
17  int dayOfYear(int day, int month, int year)
18  {
19          int sum = 0;
20          bool last = true;
21          if (year < 1753) {return -1;}
22          else if (month < 1 || month > 12) {return -1;}
23          else
24          {
25                  switch(month)
26                  {
27                          case 12:
28                          {
29                                  if(validDay(day, 1, 31)){sum += day;}
30                                  else {return -1;}
31                                  last = false;
32                                  day = 15;
33                          }
34                          case 11:
35                          {
36                                  if(validDay(day, 1, 30))
37                                  {
38                                          if(last)
39                                          {
40                                                  sum += day;
41                                                  last = false;
42                                                  day = 15;
43                                          }
44                                          else {sum += 30;}
```

```
30;}
41              }
42              else {return -1;}
43          }
44      case 10:
45          {
46              if(1<=day && day<=31)
47              {
48                  if(last)
49                  {
50                      sum = sum + day;
51                      last = false;
52                      day = 15;
53                  }
54                  else {sum = sum + 31;}
55              }
56              else {return -1;}
57          }
58      case 9:
59          {
60              if(1<=day && day<=30)
61              {
62                  if(last)
63                  {
64                      sum = sum + day;
65                      last = false;
66                      day = 15;
67                  }
68                  else {sum = sum + 30;}
69              }
70              else {return -1;}
71          }
72      case 8:
73          {
74              if(1<=day && day<=31)
75              {
76                  if(last)
77                  {
78                      sum = sum + day;
79                      last = false;
80                      day = 15;
81                  }
82                  else {sum = sum + 31;}
83              }
84              else  {return -1;}
85          }
86      case 7:
87          {
88              if(1<= day && day<=31)
89              {
90                  if(last)
91                  {
```

```
45              }
46              else {return -1;}
47          }
48      case 10:
49          {
50              if(validDay(day, 1, 31))
51              {
52                  if(last)
53                  {
54                      sum += day;
55                      last = false;
56                      day = 15;
57                  }
58                  else {sum += 31;}
59              }
60              else {return -1;}
61          }
62      case 9:
63          {
64              if(validDay(day, 1, 30))
65              {
66                  if(last)
67                  {
68                      sum += day;
69                      last = false;
70                      day = 15;
71                  }
72                  else {sum += 30;}
73              }
74              else {return -1;}
75          }
76      case 8:
77          {
78              if(validDay(day, 1, 31))
79              {
80                  if(last)
81                  {
82                      sum += day;
83                      last = false;
84                      day = 15;
85                  }
86                  else {sum += 31;}
87              }
88              else  {return -1;}
89          }
90      case 7:
91          {
92              if(validDay(day, 1, 31))
93              {
94                  if(last)
95                  {
```

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92	`                              sum = sum + day;`
93	`                              last = false;`
94	`                              day = 15;`
95	`                           }`
96	`                           else {sum = sum + 31;}`
97	`                        }`
98	`                        else {return -1;}`
99	`                     }`
100	`                  case 6:`
101	`                     {`
102	`                        if(1<=day && day<=30)`
103	`                        {`
104	`                           if(last)`
105	`                           {`
106	`                              sum = sum + day;`
107	`                              last = false;`
108	`                              day = 15;`
109	`                           }`
110	`                           else {sum =  sum + 30;}`
111	`                        }`
112	`                        else {return -1;}`
113	`                     }`
114	`                  case 5:`
115	`                     {`
116	`                        if(1<=day && day <=31)`
117	`                        {`
118	`                           if(last)`
119	`                           {`
120	`                              sum = sum + day;`
121	`                              last = false;`
122	`                              day = 15;`
123	`                           }`
124	`                           else {sum = sum + 31;}`
125	`                        }`
126	`                        else {return -1;}`
127	`                     }`
128	`                  case 4:`
129	`                     {`
130	`                        if(1<= day && day <=30)`
131	`                        {`
132	`                           if(last)`
133	`                           {`
134	`                              sum = sum + day;`
135	`                              last = false;`
136	`                              day = 15;`
137	`                           }`
138	`                           else {sum = sum + 30;}`
139	`                        }`
140	`                        else {return -1;}`

96	`                              sum += day;`
97	`                              last = false;`
98	`                              day = 15;`
99	`                           }`
100	`                           else {sum += 31;}`
101	`                        }`
102	`                        else {return -1;}`
103	`                     }`
104	`                  case 6:`
105	`                     {`
106	`                        if(validDay(day, 1, 30))`
107	`                        {`
108	`                           if(last)`
109	`                           {`
110	`                              sum += day;`
111	`                              last = false;`
112	`                              day = 15;`
113	`                           }`
114	`                           else {sum =  sum + 30;}`
115	`                        }`
116	`                        else {return -1;}`
117	`                     }`
118	`                  case 5:`
119	`                     {`
120	`                        if(validDay(day, 1, 31))`
121	`                        {`
122	`                           if(last)`
123	`                           {`
124	`                              sum += day;`
125	`                              last = false;`
126	`                              day = 15;`
127	`                           }`
128	`                           else {sum += 31;}`
129	`                        }`
130	`                        else {return -1;}`
131	`                     }`
132	`                  case 4:`
133	`                     {`
134	`                        if(validDay(day, 1, 30))`
135	`                        {`
136	`                           if(last)`
137	`                           {`
138	`                              sum += day;`
139	`                              last = false;`
140	`                              day = 15;`
141	`                           }`
142	`                           else {sum += 30;}`
143	`                        }`
144	`                        else {return -1;}`

```
141                          }                                      145                          }
142                      case 3:                                    146                      case 3:
143                      {                                          147                      {
144                          if(1<=day && day <=31)                 148                          if(validDay(day, 1, 31))
145                          {                                      149                          {
146                              if(last)                           150                              if(last)
147                              {                                  151                              {
148                                  sum = sum +                    152                                  sum += day;
     day;
149                                  last = fals                   153                                  last = fals
     e;                                                                 e;
150                                  day = 15;                      154                                  day = 15;
151                              }                                  155                              }
152                              else {sum = sum +                  156                              else {sum += 31;}
     31;}
153                          }                                      157                          }
154                          else {return -1;}                      158                          else {return -1;}
155                      }                                          159                      }
156                      case 2:                                    160                      case 2:
157                      {                                          161                      {
158                          if(leap(year))                         162                          if(leap(year))
159                          {                                      163                          {
160                              if(1<=day && day<=2                164                              if(validDay(day, 1,
     9)                                                                 29))
161                              {                                  165                              {
162                                  if(last)                       166                                  if(last)
163                                  {                              167                                  {
164                                      sum                        168                                      sum
     = sum + day;                                                      += day;
165                                      last                       169                                      last
     = false;                                                          = false;
166                                      day                        170                                      day
     = 15;                                                              = 15;
167                                  }                              171                                  }
168                                  else {sum                      172                                  else {sum
     = sum + 29;}                                                      += 29;}
169                              }                                  173                              }
170                              else {return -1;}                  174                              else {return -1;}
171                          }                                      175                          }
172                          else                                   176                          else
173                          {                                      177                          {
174                              if(1<=day && day<=2                178                              if(validDay(day, 1,
     8)                                                                 28))
175                              {                                  179                              {
176                                  if(last)                       180                                  if(last)
177                                  {                              181                                  {
178                                      sum                        182                                      sum
     = sum + day;                                                      += day;
179                                      last                       183                                      last
     = false;                                                          = false;
180                                      day                        184                                      day
     = 15;                                                              = 15;
181                                  }                              185                                  }
182                                  else {sum                      186                                  else {sum
     = sum + 28;}                                                      += 28;}
183                              }                                  187                              }
184                              else {return -1;}                  188                              else {return -1;}
185                          }                                      189                          }
186                      }                                          190                      }
187                      case 1:                                    191                      case 1:
188                      {                                          192                      {
```

```
189                    if(1<=day &&day <=31)
190                    {
191                            if(last)
192                            {
193                                   sum = sum +
       day;
194                            }
195                            else {sum = sum +
       31;}
196                    }
197                    else {return -1;}
198                }
199            }
200        }
201        return sum;
202 }
203 /*
204 void testDayOfYear(int day, int month, int year)
205 {
        printf("%d/%d/%d => %d\n", day, month, year, dayOfYe
206 ar(day, month, year));
207 }
208 /*
209 int main (void)
210 {
211        testDayOfYear(1, 1, 2008);
212        testDayOfYear(29, 2, 2008);
213        testDayOfYear(29, 2, 2009);
214        testDayOfYear(26, 9, 2008);
215        testDayOfYear(31, 12, 2008);
216        testDayOfYear(31, 12, 2009);
217        testDayOfYear(100, 1, 2009);
218        testDayOfYear(1, 100, 2008);
219        testDayOfYear(1, 1, 100);
220 }
221 */
```

```
193                    if(validDay(day, 1, 31))
194                    {
195                            if(last)
196                            {
197                                   sum += day;
198                            }
199                            else {sum += 31;}
200                    }
201                    else {return -1;}
202                }
203            }
204        }
205        return sum;
206 }
```