```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5  using System.Threading.Tasks;
6
7  namespace cl
8  {
9      public class Clock
10     {
11         Counter hour = new Counter("Hour");
12         Counter min = new Counter("Min");
13         Counter sec = new Counter("Sec");
14         string Id = "SWS01358";
15         bool is12Hr;
16
17         public Clock()
18         {
19             // Determine 12-hour or 24-hour format based on last digit
                  of Id
20             char lastChar = Id[Id.Length - 1];
21             if (char.IsDigit(lastChar) && (lastChar - '0') <= 5)
22             {
23                 is12Hr = true;
24             }
25             else
26             {
27                 is12Hr = false;
28             }
29             hour = new Counter("Hour");
30             min = new Counter("Minute");
31             sec = new Counter("Second");
32         }
33
34         public void ClockTick()
35         {
36             sec.Increment();
37             if (sec.Ticks >= 60)
38             {
39                 sec.Reset();
40                 min.Increment();
41                 if (min.Ticks >= 60)
42                 {
43                     min.Reset();
44                     hour.Increment();
45                     if (hour.Ticks >= (is12Hr ? 12 : 24))
46                     {
47                         hour.Reset();
48                     }
49                 }
50             }
51         }
52
```

```
53          public void SetTime(int h, int m, int s)
54          {
55              for (long i = 0; i < h; i++) hour.Increment();
56              for (long i = 0; i < m; i++) min.Increment();
57              for (long i = 0; i < s; i++) sec.Increment();
58          }
59
60          public void Reset()
61          {
62              hour.Reset();
63              min.Reset();
64              sec.Reset();
65          }
66
67          public override string ToString()
68          {
69              return $"{hour.Ticks:D2}:{min.Ticks:D2}:{sec.Ticks:D2}";
70          }
71      }
72  }
73
```