SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

Clock in Another Language

PDF generated at 20:35 on Thursday 23rd November, 2023

```
 1   class Counter {
 2       constructor(name){
 3           this.Name = name;
 4           this.Count = 0;
 5       }
 6
 7       increment(){
 8           this.Count++;
 9       }
10
11       reset(){
12           this.Count = 0;
13       }
14   }
15
16   var hour = new Counter();
17   var minute = new Counter();
18   var second = new Counter();
19
20   var start = false;
21
22   function updateDisplay(){
23       document.getElementById("hour").innerHTML
24       = hour.Count.toLocaleString('en-US', {minimumIntegerDigits: 2,
         ↪  useGrouping:false});
25   document.getElementById("minute").innerHTML
26       = minute.Count.toLocaleString('en-US', {minimumIntegerDigits: 2,
         ↪  useGrouping:false});
27   document.getElementById("second").innerHTML
28       = second.Count.toLocaleString('en-US', {minimumIntegerDigits: 2,
         ↪  useGrouping:false});
29   }
30
31
32   function clockTick(){
33       const myInterval = setInterval(() => {
34           console.log(start);
35           if(start == true){
36               second.increment();
37               updateDisplay();
38               if(second.Count > 59){
39                   second.reset();
40                   updateDisplay();
41                   minute.increment();
42                   updateDisplay();
43               }
44
45               if(minute.Count > 59){
46                   second.reset();
47                   updateDisplay();
48                   minute.reset();
49                   updateDisplay();
50                   hour.increment();
```

```
51                    updateDisplay();
52                }
53
54                if(hour.Count > 23){
55                    resetClock();
56                }
57            }
58            else{
59                //clearInterval(myInterval)
60            }
61        }, 1000);
62    }
63
64    function startClock(){
65        start = true;
66        console.log(start);
67
68    }
69
70    function stopClock(){
71        start = false;
72    }
73
74    function addtick(){
75        second.increment();
76        updateDisplay();
77    }
78
79    function resetClock(){
80        second.reset();
81        minute.reset();
82        hour.reset();
83        updateDisplay();
84    }
85
86    document.getElementById("hour").innerHTML
87        = hour.Count.toLocaleString('en-US', {minimumIntegerDigits: 2,
           ↪ useGrouping:false});
88    document.getElementById("minute").innerHTML
89        = minute.Count.toLocaleString('en-US', {minimumIntegerDigits: 2,
           ↪ useGrouping:false});
90    document.getElementById("second").innerHTML
91        = second.Count.toLocaleString('en-US', {minimumIntegerDigits: 2,
           ↪ useGrouping:false});
92
93    window.onload = clockTick();
```

00 : 01 : 09 [Tick] [Reset] [Start] [Stop]   01 : 00 : 04 [Tick] [Reset] [Start] [Stop]

00 : 00 : 00 [Tick] [Reset] [Start] [Stop]

index.html > ⊘ html > ⊘ body > ⊘ button#button1

```html
1   <html lang="en">
2   <head>
3       <meta charset="UTF-8">
4       <meta name="viewport" content="width=device-width, initial-scale=1.0">
5       <title>ClockJS</title>
6       <style>
7           .container{
8               display:inline-block;
9           }
10
11      </style>
12
13  </head>
14  <body>
15
16      <div id = "hour" class="container"></div>
17      <div class ="space container">:</div>
18      <div id = "minute" class="container"></div>
19      <div class ="space container">:</div>
20      <div id = "second"  class="container"></div>
21
22      <button id = "button1" onclick="addtick()">Tick</button>
23      <button id = "button2" onclick="resetClock()">Reset</button>
24      <button id = "button3" onclick="startClock()">Start</button>
25      <button id = "button4" onclick="stopClock()">Stop</button>
26
27  </body>
28  <script src="./App.js"></script>
29  </html>
```