

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

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# Clock in Another Language

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```
1 class CounterClass:
2     def __init__(c, names):
3         c._counts = 0
4         c._names = names
5
6     @property
7     def getname(c):
8         return c._names
9
10    @property
11    def setname(c, values):
12        c._names = values
13
14    @property
15    def counterticks(c):
16        return c._counts
17
18    def incrementtick(c):
19        c._counts += 1
20
21    def resettick(c):
22        c._counts = 0
23
24
25
26
27 class ClockClass:
28     def __init__(c):
29         c._sec = CounterClass("sec")
30         c._min = CounterClass("min")
31         c._hrs = CounterClass("hrs")
32
33     def increment_the_clock(c):
34         c._sec.incrementtick()
35         if c._sec.counterticks == 60:
36             c._sec.resettick()
37             c._min.incrementtick()
38
39             if c._min.counterticks == 60:
40                 c._min.resettick()
41                 c._hrs.incrementtick()
42
43                 if c._hrs.counterticks == 24:
44                     c._hrs.resettick()
45
46     def show(c):
47         return f"{c._hrs.counterticks:02d} : {c._min.counterticks:02d} :
↵ {c._sec.counterticks:02d}"
48
49 if __name__ == "__main__":
50     newClock = ClockClass()
51
52     i = 0
```

```
53     while i<86400:
54         i+=1
55
56
57         newClock.increment_the_clock()
58         print(newClock.show())
```

