

C:\assignments\OOP\Tasks\Tasks\Pass\Clock\Clock.py

```
1 class Counter:
2     def __init__(self, max_value, initial_value=0):
3         self.value = initial_value
4         self.max_value = max_value
5
6     def increment(self):
7         self.value = (self.value + 1) % self.max_value
8
9     def set_value(self, value):
10        self.value = value
11
12    def get_value(self):
13        return self.value
14
15 class Clock:
16    def __init__(self, hours=0, minutes=0, seconds=0):
17        self.hours = Counter(24, hours)
18        self.minutes = Counter(60, minutes)
19        self.seconds = Counter(60, seconds)
20
21    def tick(self):
22        self.seconds.increment()
23        if self.seconds.get_value() == 0:
24            self.minutes.increment()
25            if self.minutes.get_value() == 0:
26                self.hours.increment()
27
28    def set_time(self, hours, minutes, seconds):
29        self.hours.set_value(hours)
30        self.minutes.set_value(minutes)
31        self.seconds.set_value(seconds)
32
33    def display_time(self):
34        return f"{self.hours.get_value():02}:{self.minutes.get_value():02}:
35        {self.seconds.get_value():02}"
36
37 if __name__ == "__main__":
38     clock = Clock()
39
40     clock.set_time(11, 40, 00)
41
42     for _ in range(1000):
43         clock.tick()
44         print(clock.display_time())
```