## SWINBURNE UNIVERSITY OF TECHNOLOGY

## COS20007 OBJECT ORIENTED PROGRAMMING

## 2.2P - Counter Class

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File 1 of 3 Program class

```
using System;
   namespace CounterTask {
3
        public class MainClass {
5
            private static void PrintCounters(Counter[] counters) {
                 foreach (Counter c in counters) {
                     Console.WriteLine($"{c.Name} is {c.Count}");
12
                }
13
            }
15
            public static void Main (string[] args) {
17
18
                Counter[] myCounters = new Counter[3];
19
20
                myCounters = new Counter[] {
22
                     myCounters[0] = new Counter("Counter 1"),
23
                     myCounters[1] = new Counter("Counter 2"),
24
                     myCounters[2] = myCounters[0]
25
26
            };
27
29
                for (int i = 0; i<10; i++) {
30
31
                     myCounters[0].Increment();
32
                }
34
35
                for (int i = 0; i<15; i++) {
36
37
                     myCounters[1].Increment();
39
                }
40
41
                PrintCounters(myCounters);
42
43
                myCounters[2].Reset();
                PrintCounters(myCounters);
46
47
            }
48
        }
49
   }
50
```

File 2 of 3 Counter class

```
using System;
2
    namespace CounterTask {
        public class Counter {
5
6
             private int _count;
             private string _name;
             public string Name {
10
11
                  get {
12
                      return _name;
13
                  }
14
15
                  set {
                       _name = value;
17
18
19
             }
20
             public int Count {
22
23
                  get {
24
                      return _count;
25
26
27
             }
28
29
             public Counter(string name) {
30
31
32
                  _name = name;
                  _count = 0;
34
35
             }
36
37
             public void Increment() {
38
39
                  _count ++;
40
41
             }
42
43
             public void Reset() {
44
                  _count = 0;
46
47
             }
48
49
50
        }
51
    }
52
```

## Microsoft Visual Studio Debug Console

```
Counter 1 is 10
Counter 2 is 15
Counter 1 is 10
Counter 1 is 0
Counter 2 is 15
Counter 1 is 0
```