Swinburne University of Technology

COS20007 Object Oriented Programming

Counter Class

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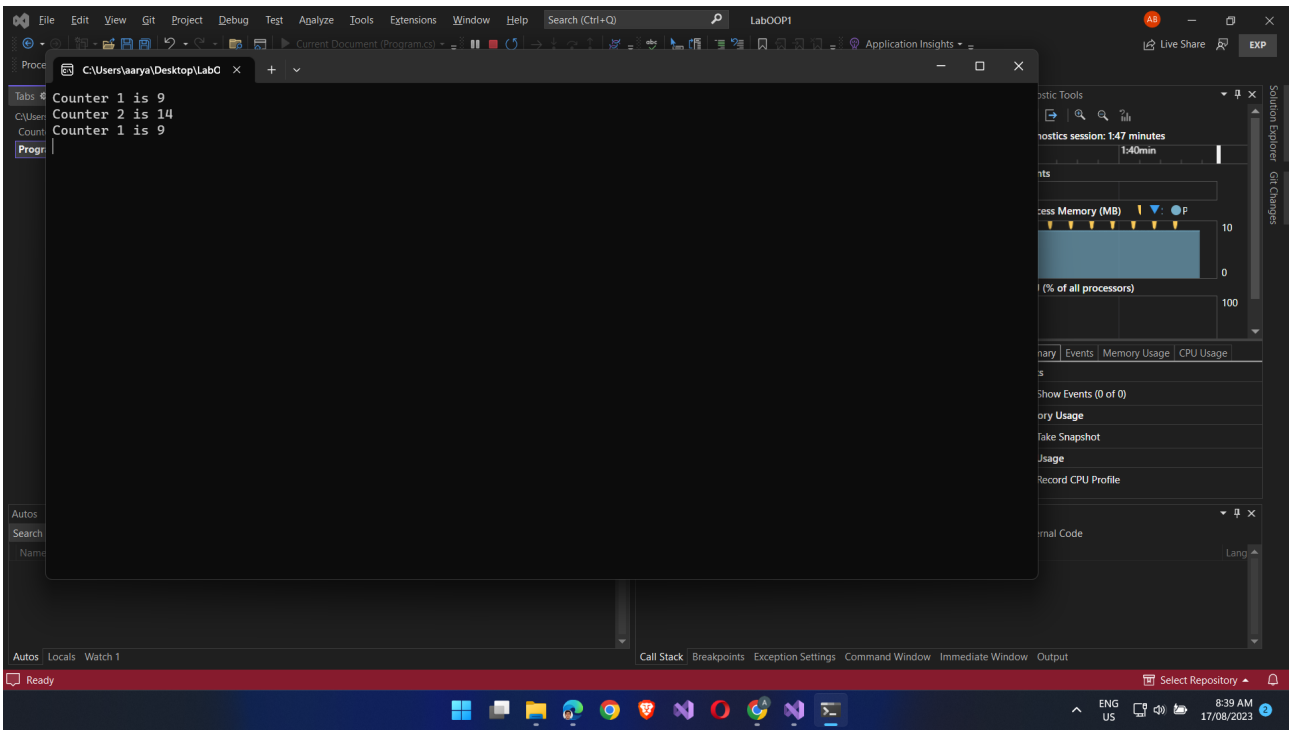
```
using System;

namespace CounterClass
{
    internal class CounterProgram
    {
 //Method to print the names and tick values of counters

        private static void PrintCounters(Counter[] MECounters)
        {
            foreach (Counter counter in MECounters)
            {
                Console.WriteLine("{0} is {1}", counter.NameCounter, counter.Ticks);
            }
            Console.ReadLine();
        }

        static void Main(string[] args)
        {
// Create an array to hold Counter instances

            Counter[] MECounters = new Counter[3];

// Initialize the first and second counters

            MECounters[0] = new Counter("Counter 1");
            MECounters[1] = new Counter("Counter 2");
            MECounters[2] = MECounters[0];

// Increment the first counter 9 times

            for (int i = 0; i < 9; i += 1)
            {
                MECounters[0].IncrementCounter();
            }

// Increment the second counter 14 times

            for (int i = 0; i < 14;  i += 1)
            {
                MECounters[1].IncrementCounter();
            }

// Print the counter values after incrementing

            CounterProgram.PrintCounters(MECounters);
            MECounters[2].ResetCounter();

            CounterProgram.PrintCounters(MECounters);
        }
    }
}
```

```
using System;

namespace CounterClass
{
    public class Counter
    {

// Private fields to store the counter's name and count value

        private string _name;
        private int _count;

// Constructor that initializes the counter with a name and count of 0

        public Counter(string name)
        {
            _name = name;
            _count = 0;
        }

 // Property to get the current count value

        public int Ticks
        {
            get
            {
                return _count;
            }
        }

 // Property to get or set the counter's name

        public string NameCounter
        {
            get
            {
                return _name;
            }
            set
            {
                _name = value;
            }
        }

// Method to increment the counter by 1
        public void IncrementCounter()
        {
            _count += 1;
        }

// Method to reset the counter to 0
        public void ResetCounter()
        {
```

```
54                _count = 0;
55            }
56        }
57    }
```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Counter 1 is 9
Counter 2 is 14
Counter 1 is 9
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Show Events (0 of 0)
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Call Stack
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