

Pass task 2.2:

Counter.cs file:

E:\COS20007\week2\Task2_2P\CounterTask\Counter.cs

1

```
1 public class Counter
2 {
3     private int _count;
4     private string _name;
5
6     public Counter(string name)
7     {
8         _name = name;
9         _count = 0;
10    }
11
12    public void Increment()
13    {
14        _count++;
15    }
16
17    public void Reset()
18    {
19        _count = 0;
20    }
21
22    public string Name
23    {
24        get
25        {
26            return _name;
27        }
28        set
29        {
30            _name = value;
31        }
32    }
33
34    public int Ticks
35    {
36        get
37        {
38            return _count;
39        }
40    }
41
42    //public void ResetByDefault()
43    //{
44    //    _count = 2147483647473;
45    //}
46 }
```

Program.cs file:

E:\COS20007\week2\Task2_2P\CounterTask\Program.cs

1

```
1 using System;
2 namespace CounterTask
3 {
4     internal class Program
5     {
6         private static void PrintCounters(Counter[] counters)
7         {
8             foreach (Counter c in counters)
9             {
10                 Console.WriteLine("{0} is {1}", c.Name, c.Ticks);
11             }
12         }
13
14         static void Main(string[] args)
15         {
16             Counter[] myCounters= new Counter[3];
17             myCounters[0] = new Counter("Counter 1");
18             myCounters[1] = new Counter("Counter 2");
19             myCounters[2] = myCounters[0];
20
21             for(int i=1; i<10; i++)
22             {
23                 myCounters[0].Increment();
24             }
25
26             for(int i=1; i<15; i++)
27             {
28                 myCounters[1].Increment();
29             }
30
31             PrintCounters(myCounters);
32             myCounters[2].Reset();
33             PrintCounters(myCounters);
34         }
35     }
36 }
37
```

13. Tell the Counter to increase the count value. Does the code still run without any bugs/crash? What is the reason behind? You can provide the answers as the comments in the code.

-The code will appear a bug/crash because the count value which is 2,147,483,647,473 exceeded the maximum value that an integer can have in C#(2,147,483,647).

Output

Show output from: Build

Build started at 9:11 PM...

1>----- Build started: Project: CounterTask, Configuration: Debug Any CPU -----

1>Skipping analyzers to speed up the build. You can execute 'Build' or 'Rebuild' command to run analyzers.

1>E:\COS20007\week2\Task2_2P\CounterTask\Counter.cs(44,18,44,31): error CS0266: Cannot implicitly convert type 'long' to 'int'. An explicit conversion exists (are you missing a cast?)

1>Done building project "CounterTask.csproj" -- FAILED.

===== Build: 0 succeeded, 1 failed, 0 up-to-date, 0 skipped =====

===== Build completed at 9:11 PM and took 00.357 seconds =====

Error List

Entire Solution 1 Error 0 Warnings 0 of 3 Messages Build + IntelliSense

Search Error List

	Code	Description	Project	File	Line	Suppression State
✖	CS0266	Cannot implicitly convert type 'long' to 'int'. An explicit conversion exists (are you missing a cast?)	CounterTask	Counter.cs	44	

Program's output:

Microsoft Visual Studio Debug Console

Counter 1 is 9
Counter 2 is 14
Counter 1 is 9
Counter 1 is 0
Counter 2 is 14
Counter 1 is 0

E:\COS20007\week2\Task2_2P\CounterTask\bin\Debug\net8.0\CounterTask.exe (process 16404) exited with code 0.

To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.

Press any key to close this window . . .