

## LinksPlatform's Platform.Incrementers Class Library

### 1.1 ./csharp/Platform.Incrementers/IIncrementer.cs

```
1 using System.Runtime.CompilerServices;
2
3 namespace Platform.Incrementers
4 {
5     /// <summary>
6     /// <para>Defines an incrementer that increments any object.</para>
7     /// <para>Определяет инкрементер, который выполняет приращение любого объекта.</para>
8     /// </summary>
9     public interface IIncrementer
10     {
11         /// <summary>
12         /// <para>Increments the object by a specific value.</para>
13         /// <para>Выполняет приращение объекта на определённое значение.</para>
14         /// </summary>
15         [MethodImpl(MethodImplOptions.AggressiveInlining)]
16         void Increment();
17     }
18 }
```

### 1.2 ./csharp/Platform.Incrementers/IIncrementer[TNumber].cs

```
1 using System.Runtime.CompilerServices;
2
3 namespace Platform.Incrementers
4 {
5     /// <summary>
6     /// <para>Defines an incrementer that increments any number with a specific type.</para>
7     /// <para>Определяет инкрементер, который выполняет приращение любого числа определённого
8     ↪ типа.</para>
9     /// </summary>
10    /// <typeparam name="TNumber"><para>Type of incremented number.</para><para>Тип
11    ↪ увеличиваемого числа.</para></typeparam>
12    public interface IIncrementer<TNumber>
13    {
14        /// <summary>
15        /// <para>Increments the number by a specific value.</para>
16        /// <para>Увеличивает число на определённое значение.</para>
17        /// </summary>
18        /// <param name="number"><para>The number to be incremented.</para><para>Увеличиваемое
19        ↪ число.</para></param>
20        /// <returns><para>The incremented number.</para><para>Увеличенное
21        ↪ число.</para></returns>
22        [MethodImpl(MethodImplOptions.AggressiveInlining)]
23        TNumber Increment(TNumber number);
24    }
25 }
```

### 1.3 ./csharp/Platform.Incrementers/Incrementer.cs

```
1 using System.Runtime.CompilerServices;
2
3 #pragma warning disable CS1591 // Missing XML comment for publicly visible type or member
4
5 namespace Platform.Incrementers
6 {
7     /// <remarks>
8     /// Must be class, not struct (in order to persist access to Result field value).
9     /// </remarks>
10    public class Incrementer : IIncrementer
11    {
12        /// <summary>
13        /// <para>
14        /// The result.
15        /// </para>
16        /// <para></para>
17        /// </summary>
18        protected ulong _result;
19
20        /// <summary>
21        /// <para>
22        /// Gets the result value.
23        /// </para>
24        /// <para></para>
25        /// </summary>
26        public ulong Result
27        {
28            [MethodImpl(MethodImplOptions.AggressiveInlining)]
29            get => _result;
30        }
31    }
32 }
```

```

30     }
31
32     /// <summary>
33     /// <para>
34     /// Initializes a new <see cref="Incrementer"/> instance.
35     /// </para>
36     /// <para></para>
37     /// </summary>
38     /// <param name="initialValue">
39     /// <para>A initial value.</para>
40     /// <para></para>
41     /// </param>
42     [MethodImpl(MethodImplOptions.AggressiveInlining)]
43     public Incrementer(ulong initialValue) => _result = initialValue;
44
45     /// <summary>
46     /// <para>
47     /// Initializes a new <see cref="Incrementer"/> instance.
48     /// </para>
49     /// <para></para>
50     /// </summary>
51     [MethodImpl(MethodImplOptions.AggressiveInlining)]
52     public Incrementer() { }
53
54     /// <summary>
55     /// <para>
56     /// Increments this instance.
57     /// </para>
58     /// <para></para>
59     /// </summary>
60     [MethodImpl(MethodImplOptions.AggressiveInlining)]
61     public void Increment() => _result++;
62 }
63 }

```

#### 1.4 ./csharp/Platform.Incrementers/Incrementer[TValue, TDecision].cs

```

1 using System.Runtime.CompilerServices;
2
3 #pragma warning disable IDE0060 // Remove unused parameter
4 #pragma warning disable CS1591 // Missing XML comment for publicly visible type or member
5
6 namespace Platform.Incrementers
7 {
8     /// <summary>
9     /// <para>
10    /// Represents the incrementer.
11    /// </para>
12    /// <para></para>
13    /// </summary>
14    /// <seealso cref="Incrementer"/>
15    public class Incrementer<TValue, TDecision> : Incrementer
16    {
17        private readonly TDecision _trueValue;
18
19        /// <summary>
20        /// <para>
21        /// Initializes a new <see cref="Incrementer"/> instance.
22        /// </para>
23        /// <para></para>
24        /// </summary>
25        /// <param name="initialValue">
26        /// <para>A initial value.</para>
27        /// <para></para>
28        /// </param>
29        /// <param name="trueValue">
30        /// <para>A true value.</para>
31        /// <para></para>
32        /// </param>
33        [MethodImpl(MethodImplOptions.AggressiveInlining)]
34        public Incrementer(ulong initialValue, TDecision trueValue) : base(initialValue) =>
35            ↪ _trueValue = trueValue;
36
37        /// <summary>
38        /// <para>
39        /// Initializes a new <see cref="Incrementer"/> instance.
40        /// </para>
41        /// <para></para>
42        /// </summary>
43        /// <param name="trueValue">

```

```

43     /// <para>A true value.</para>
44     /// <para></para>
45     /// </param>
46     [MethodImpl(MethodImplOptions.AggressiveInlining)]
47     public Incrementer(TDecision trueValue) => _trueValue = trueValue;
48
49     /// <summary>
50     /// <para>
51     /// Initializes a new <see cref="Incrementer"/> instance.
52     /// </para>
53     /// <para></para>
54     /// </summary>
55     [MethodImpl(MethodImplOptions.AggressiveInlining)]
56     public Incrementer() { }
57
58     /// <summary>
59     /// <para>
60     /// Increments the and return true.
61     /// </para>
62     /// <para></para>
63     /// </summary>
64     /// <returns>
65     /// <para>The true value.</para>
66     /// <para></para>
67     /// </returns>
68     [MethodImpl(MethodImplOptions.AggressiveInlining)]
69     public TDecision IncrementAndReturnTrue()
70     {
71         _result++;
72         return _trueValue;
73     }
74
75     /// <summary>
76     /// <para>
77     /// Increments the and return true using the specified value.
78     /// </para>
79     /// <para></para>
80     /// </summary>
81     /// <param name="value">
82     /// <para>The value.</para>
83     /// <para></para>
84     /// </param>
85     /// <returns>
86     /// <para>The true value.</para>
87     /// <para></para>
88     /// </returns>
89     [MethodImpl(MethodImplOptions.AggressiveInlining)]
90     public TDecision IncrementAndReturnTrue(TValue value)
91     {
92         _result++;
93         return _trueValue;
94     }
95 }
96 }

```

## 1.5 ./csharp/Platform.Incrementers/Incrementer[TValue].cs

```

1  using System.Runtime.CompilerServices;
2
3  #pragma warning disable CS1591 // Missing XML comment for publicly visible type or member
4
5  namespace Platform.Incrementers
6  {
7      /// <summary>
8      /// <para>
9      /// Represents the incrementer.
10     /// </para>
11     /// <para></para>
12     /// </summary>
13     /// <seealso cref="Incrementer{TValue, bool}"/>
14     public class Incrementer<TValue> : Incrementer<TValue, bool>
15     {
16         /// <summary>
17         /// <para>
18         /// Initializes a new <see cref="Incrementer"/> instance.
19         /// </para>
20         /// <para></para>
21         /// </summary>
22         /// <param name="initialValue">
23         /// <para>A initial value.</para>

```

```

24     /// <para></para>
25     /// </param>
26     [MethodImpl(MethodImplOptions.AggressiveInlining)]
27     public Incrementer(ulong initialValue) : base(initialValue, true) { }
28
29     /// <summary>
30     /// <para>
31     ///     Initializes a new <see cref="Incrementer"/> instance.
32     /// </para>
33     /// <para></para>
34     /// </summary>
35     [MethodImpl(MethodImplOptions.AggressiveInlining)]
36     public Incrementer() : base(true) { }
37 }
38 }

```

## 1.6 ./csharp/Platform.Incrementers.Tests/IncrementerTests.cs

```

1  using Xunit;
2
3  namespace Platform.Incrementers.Tests
4  {
5      public class IncrementerTests
6      {
7          [Fact]
8          public void ParameterlessConstructedSetterTest()
9          {
10             Incrementer<int> incrementer = new Incrementer<int>();
11             Assert.Equal(default, incrementer.Result);
12         }
13
14         [Fact]
15         public void ConstructedWithDefaultValueSetterTest()
16         {
17             Incrementer<int> incrementer = new Incrementer<int>(9UL);
18             Assert.Equal(9UL, incrementer.Result);
19         }
20
21         [Fact]
22         public void MethodsWithBooleanReturnTypeTest()
23         {
24             Incrementer<int> incrementer = new Incrementer<int>();
25             incrementer.Increment();
26             Assert.Equal(1UL, incrementer.Result);
27             Assert.True(incrementer.IncrementAndReturnTrue());
28             Assert.Equal(2UL, incrementer.Result);
29         }
30
31         [Fact]
32         public void MethodsWithIntegerReturnTypeTest()
33         {
34             Incrementer<int, int> incrementer = new Incrementer<int, int>(1);
35             incrementer.Increment();
36             Assert.Equal(1UL, incrementer.Result);
37             Assert.Equal(1, incrementer.IncrementAndReturnTrue());
38             Assert.Equal(2UL, incrementer.Result);
39         }
40     }
41 }

```

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