```
LinksPlatform's Platform.Communication.Protocol.Lino Class Library
     ./Platform.Communication.Protocol.Lino/IListExtensions.cs
   using System;
   using System.Collections.Generic;
using System.Linq;
2
   using System.Runtime.CompilerServices;
4
   #pragma warning disable CS1591 // Missing XML comment for publicly visible type or member
6
   namespace Platform.Communication.Protocol.Lino
8
        public static class IListExtensions
10
11
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
12
            public static string Format(this IList<Link> links) => string.Join(Environment.NewLine,
13
            → links.Select(l => l.ToString()));
14
   }
15
1.2
     ./Platform.Communication.Protocol.Lino/Link.cs
   using System;
   using System.Collections.Generic;
   using System.Runtime.CompilerServices;
3
   using System.Text;
using Platform.Collections;
5
   using Platform.Collections.Lists;
   #pragma warning disable CS1591 // Missing XML comment for publicly visible type or member
9
   namespace Platform.Communication.Protocol.Lino
10
11
        public struct Link : IEquatable<Link>
12
13
14
            public string Id
15
                 [MethodImpl(MethodImplOptions.AggressiveInlining)]
16
17
                 [MethodImpl(MethodImplOptions.AggressiveInlining)]
18
19
            }
20
            public IList<Link> Values
22
23
                 [MethodImpl(MethodImplOptions.AggressiveInlining)]
24
                 [MethodImpl(MethodImplOptions.AggressiveInlining)]
27
            }
28
29
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
            public Link(string id, IList<Link> values) => (Id, Values) = (id, values);
3.1
32
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
33
            public Link(IList<Link> values) : this(null, values) { }
34
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
36
            public Link(string id) : this(id, null) { }
37
38
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
39
            public override string ToString() => Values.IsNullOrEmpty() ? $\$"({Id})" :
40
               GetLinkValuesString();
41
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
42
            private string GetLinkValuesString() => Id == null ? $\frac{\$}{\}"({GetValuesString()})" :
43
                $\"({Id}: {GetValuesString()})\";
44
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
45
            public string GetValuesString()
47
                var sb = new StringBuilder();
                for (int i = 0; i < Values.Count; i++)</pre>
49
                {
50
                     if (i > 0)
5.1
                     {
                         sb.Append(' ');
53
54
                     sb.Append(GetValueString(Values[i]));
55
                return sb.ToString();
57
            }
```

```
5.9
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
            public static string GetValueString(Link value) => value.ToLinkOrIdString();
61
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
63
            public string ToLinkOrIdString() => Values.IsNullOrEmpty() ? Id : ToString();
64
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
66
            public static implicit operator Link(string value) => new Link(value);
67
68
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
69
            public static implicit operator Link(ValueTuple<string, IList<Link>> value) => new
70

→ Link(value.Item1, value.Item2);

71
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
72
            public override bool Equals(object obj) => obj is Link link ? Equals(link) : false;
74
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
75
            public override int GetHashCode() => (Id, Values.GenerateHashCode()).GetHashCode();
76
77
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
78
            public bool Equals(Link other) => Id == other.Id && Values.EqualTo(other.Values);
79
80
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
81
            public static bool operator ==(Link left, Link right) => left.Equals(right);
82
83
            [MethodImpl(MethodImplOptions.AggressiveInlining)]
84
            public static bool operator !=(Link left, Link right) => !(left == right);
85
       }
86
   }
87
    ./Platform.Communication.Protocol.Lino.Tests/ParserTests.cs
   using Xunit;
   namespace Platform.Communication.Protocol.Lino.Tests
4
       public static class ParserTests
5
6
            [Fact]
            public static void ParseAndStringifyTest()
9
                var source = @"(papa (lovesMama: loves mama))
10
    (son lovesMama)
11
   (daughter lovesMama)
12
   (all (love mama))";
13
                var parser = new Parser();
14
                var links = parser.Parse(source);
                var target = links.Format();
16
                Assert.Equal(source, target);
17
            }
18
       }
19
   }
20
```

Index

- ./Platform.Communication.Protocol.Lino.Tests/ParserTests.cs, 2 ./Platform.Communication.Protocol.Lino/IListExtensions.cs, 1 ./Platform.Communication.Protocol.Lino/Link.cs, 1