

```

1 class Schema
2 {
3     private string pattern = @"^s*(?<redefines>R?)(?<level>\d+)\s+(?<varName>[
4     \S+)((\s+(?<type>[xcnpXCNP])\s+((?<length>\d+))(\s,(?<decimalPlaces>\d
5     +)))?(?<repeatCount>\d+)?)(\s{2,}(?<comment>.*))?$";
6     private string schemaStr = "";
7
8     public AbstractNode ParseLine(string line)
9     {
10         // gibt eine Value- oder GroupNode zurück, je nachdem ob line
11         // Angaben zu Typ und ByteAnzahl hat oder nicht
12         // wenn pattern nicht matcht wird null zurückgegeben
13     }
14
15     public GroupNode Parse()
16     {
17         var stack = new Stack<AbstractNode>();
18         var root = new GroupNode(false, 0, "root", 1, 1, "");
19         stack.Push(root);
20
21         Action addChildFromStackToParent =
22             () =>
23             {
24                 var child = stack.Pop();
25                 var parent = stack.Peek();
26                 parent.AddChild(child);
27                 for (int currentRepeatIndex = 2; currentRepeatIndex <=
28                     child.RepeatCount; ++currentRepeatIndex)
29                 {
30                     parent.AddChild(child.CreateCopyWithIndex
31                         (currentRepeatIndex));
32                 }
33             };
34
35         var schemaLines = schemaStr.Split(new string[] { "\r\n", "\n" },
36             StringSplitOptions.RemoveEmptyEntries);
37         foreach (var currentLine in schemaLines)
38         {
39             var currentNode = ParseLine(currentLine);
40             if (currentNode == null) { continue; }
41             while (currentNode.Level <= stack.Peek().Level)
42             {
43                 addChildFromStackToParent();
44             }
45             stack.Push(currentNode);
46         }
47         while (stack.Count >= 2)
48         {
49             addChildFromStackToParent();
50         }
51         return root;
52     }
53 }

```