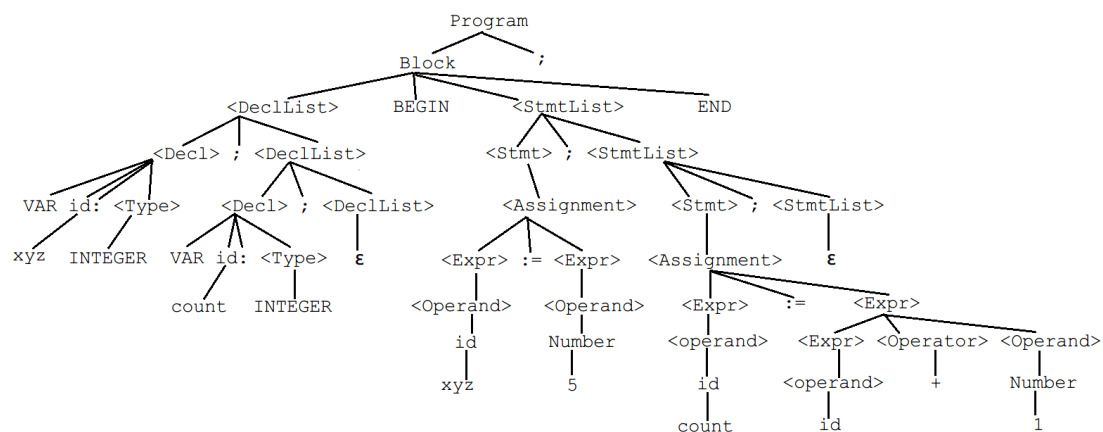


BNF推导2

Parse tree:



The operator “+” is left-associative.

```
1  VAR xyz: INTEGER;  
2  VAR count: INTEGER;  
3  BEGIN  
4      xyz := 5;  
5      count := xyz + 1;  
6  END;
```

Derivation:

```
1  <program> -> <Block>;  
2  -> <DeclList> BEGIN <StmtList> END;  
3  
4  -> <Decl> ; <DeclList>  
5      BEGIN <StmtList> END;  
6  
7  -> VAR id: <Type>;  
8      <Decl> ; <DeclList>  
9      BEGIN <StmtList> END;
```

```
10
11 ->  VAR xyz: INTEGER;
12      VAR id: <Type>;
13      BEGIN <StmtList> END;
14
15 ->  VAR xyz: INTEGER;
16      VAR count: INTEGER;
17      BEGIN
18          <Stmt>;
19          <StmtList>
20      END;
21
22 ->  VAR xyz: INTEGER;
23      VAR count: INTEGER;
24      BEGIN
25          <Assignment>;
26          <Stmt>;
27          <StmtList>
28      END;
29
30 ->  VAR xyz: INTEGER;
31      VAR count: INTEGER;
32      BEGIN
33          <Expr> := <Expr>;
34          <Assignment>;
35      END;
36
37 ->  VAR xyz: INTEGER;
38      VAR count: INTEGER;
39      BEGIN
40          <Operand> := <Operand>;
41          <Expr> := <Expr>;
```

```
42     END;
43
44 ->  VAR xyz: INTEGER;
45     VAR count: INTEGER;
46     BEGIN
47         <Operand> := <Operand>;
48         <Operand> := <Expr> <Operator>
    <Operand>;
49     END;
50
51 ->  VAR xyz: INTEGER;
52     VAR count: INTEGER;
53     BEGIN
54         id := Number;
55         id := <Operand> <Operator> <Operand>;
56     END;
57
58 ->  VAR xyz: INTEGER;
59     VAR count: INTEGER;
60     BEGIN
61         xyz := 5;
62         count := id + Number;
63     END;
64
65 ->  VAR xyz: INTEGER;
66     VAR count: INTEGER;
67     BEGIN
68         xyz := 5;
69         count := xyz + 1;
70     END;
```