0: Comment

```
** ...
```

Any other ASCII

1: Object Set Name

```
CIdentifier
```

Identifiers with the first character capitalized.

2: Connection Name

```
LIdentifier
```

Identifiers contain all lower-case characters and underline.

3: Primary Object Set Declaration

```
Object Set Name [ object ] ;
```
4: Relationship Set Declaration

5: Constraint

Integer 2 must greater than Integer 1

6: Generalization/Specialization

7: Data Frame

We don’t implement “Confidence Tag” at this time.
8: Case Tag

```
  case sensitive
     ↓
  case insensitive
```

9: Confidence Tag

```
   Real
```

The real number must be between 0 and 1.
We don’t implement this rule now.

10: Data Frame Body

```
   Data Frame Body 1
     ↓
   Data Frame Body 2
```

11: Data Frame Body 1

```
  Constant Group
     ↙
     ↓
  Lexicon Group
       ↓
     ↓
  Keyword Group
```

Either “lexicon group” or “keyword group” can happen at most once.

12: Data Frame Body 2

```
   Keyword Group
```
13: Constant Group

```
constant -> Constant Element ;
```

14: Constant Element

```
{ Extract Pattern Context Pattern Except Pattern Filter Pattern Substitute Pattern }
```

Extract Pattern must appear once. Any of the other patterns should only appear at most once. It may be handled in symbol table.

15: Regular String

```
" Perl Style Regular Expression "
```

The only place that the regular expression can be empty is at the right side of “substitute” rule.

16: Extract Pattern

```
extract -> Lexicon Name , Regular String ; Case Tag
```

17: Context Pattern

```
context → Regular String → Case Tag ;
```

18: Except Pattern

```
except → Regular String → Case Tag ;
```

19: Filter Pattern

```
filter → Regular String → Quote Tag ;
```

We don’t implement “Quote Tag” this time.

20: Quote Tag

```
use quote
```

We don’t implement this rule now.

21: Substitute Pattern

```
substitute → Regular String → Regular String ;
```

22: Keyword Group

```
keyword → Regular String → Case Tag ;
```
We don’t implement “separator Regular String” branch now.

Primary Object Declaration happens only once.
Relationship Set Declaration and Data Frame may happen one or more times.
Gene/Spec happens zero or more time.