

Lab 6/7 – Lexer

Patrick Tyler
Patrick.Tyler1@marist.edu

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1 Crafting A Compiler (lab 6)

1.1 5.5 transform the grammar into LL(1)

```
1 DeclList      → Decl; DeclList
2              | Decl
3 Decl          → Type : IdList
4 IdList        → id IdList'
5 IdList'       → IdList
6              |
7 Type          → ScalarType
8              | array ( ScalarTypeList ) of Type
9 ScalarType    → ScalarType' id
10             | ScalarType' Bound . . Bound
11 ScalarType'   → id
12             |
13 ScalarType''  →
14             | . . Bound
15 Bound         → Sign intconstant
16 Sign         → +
17             |
18             |
19 ScalarTypeList → ScalarType, ScalarTypeList
20 ScalarTypeList' → ScalarType
21             |
```

1.2 Execercise 4.5.3 Bottom-up / shift reduce parse

input:	000111	shift	stack:
input:	00111	shift	stack: 0
input:	0111	shift	stack: 00
input:	111	shift	stack: 000
input:	11	reduce	stack: 0001
input:	11	shift	stack: 00S
input:	1	reduce	stack: 00S1
input:	1	shift	stack: 0S
input:		shift	stack: 0S1
input:		reduce	stack: 0S1
input:		reduce	stack: S