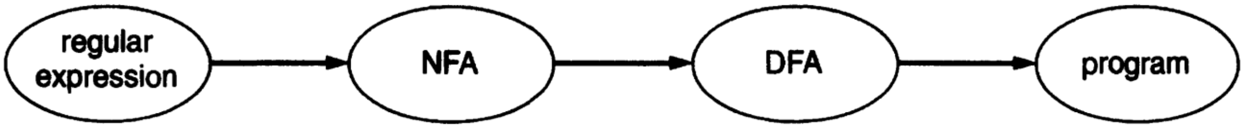
Compiler #1 Scanner

Team: 22

In our language we consider:
letter = [a-z] | [A-Z] | _
digit = [0-9]

We need specific patterns to represent identifiers, constants, relational operators, and comments.

Then, converting them to NFA and DFA to write the scanner program.

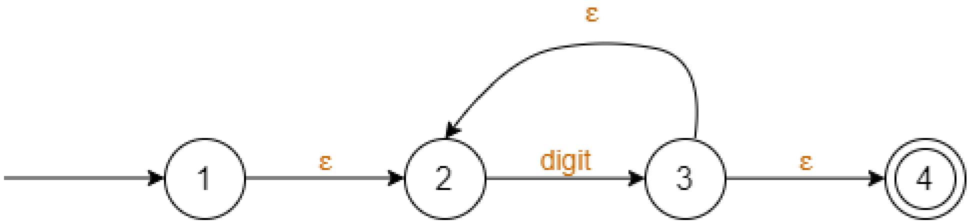


❖Regular Expressions:

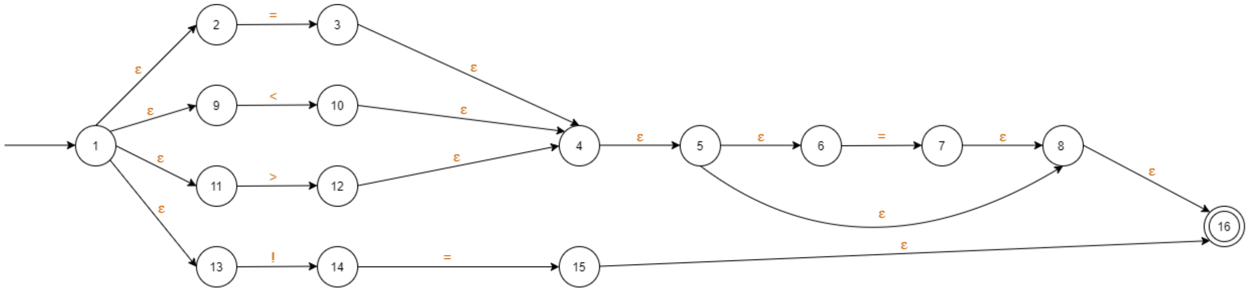
1- Constant -> digit$^+$
2- Relational Operator **-> ((=** | < | **>) =?) | !=**
3- Identifier **->** letter (letter | digit)*
4- Comment **->** / **(^ | @** (letter | digit)* **@/)**

❖NFAs:

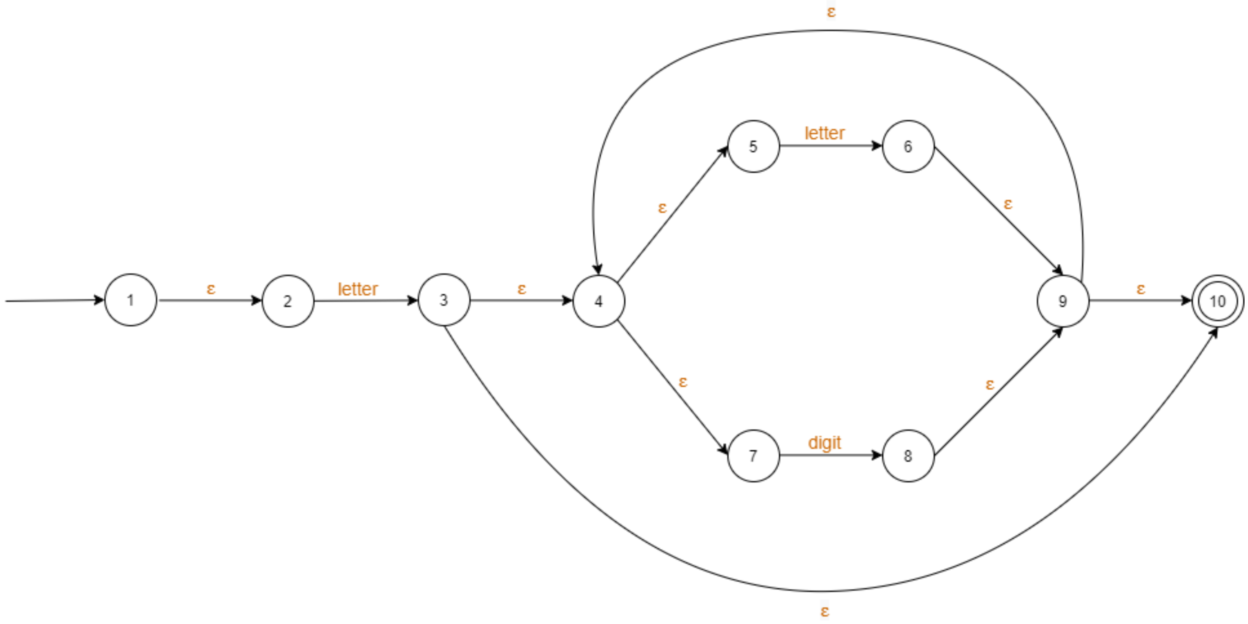
1- NFA for Constant:



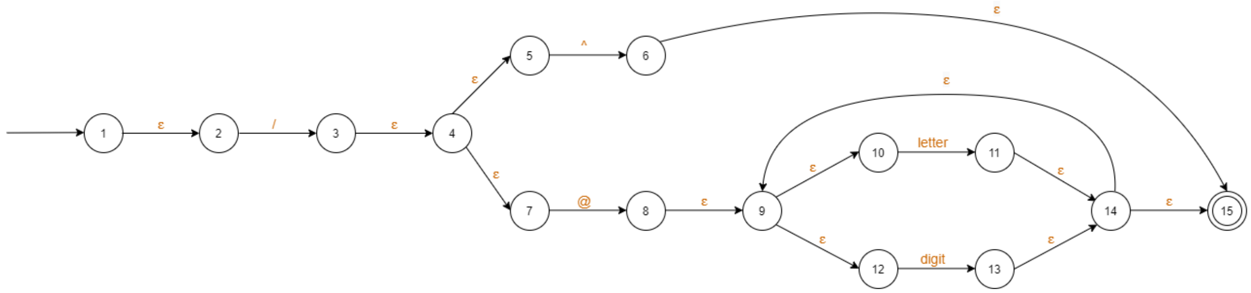
2- NFA for Relational Operators:



3- NFA for Identifiers:

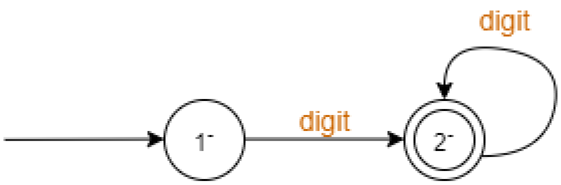


4- NFA for Comments:

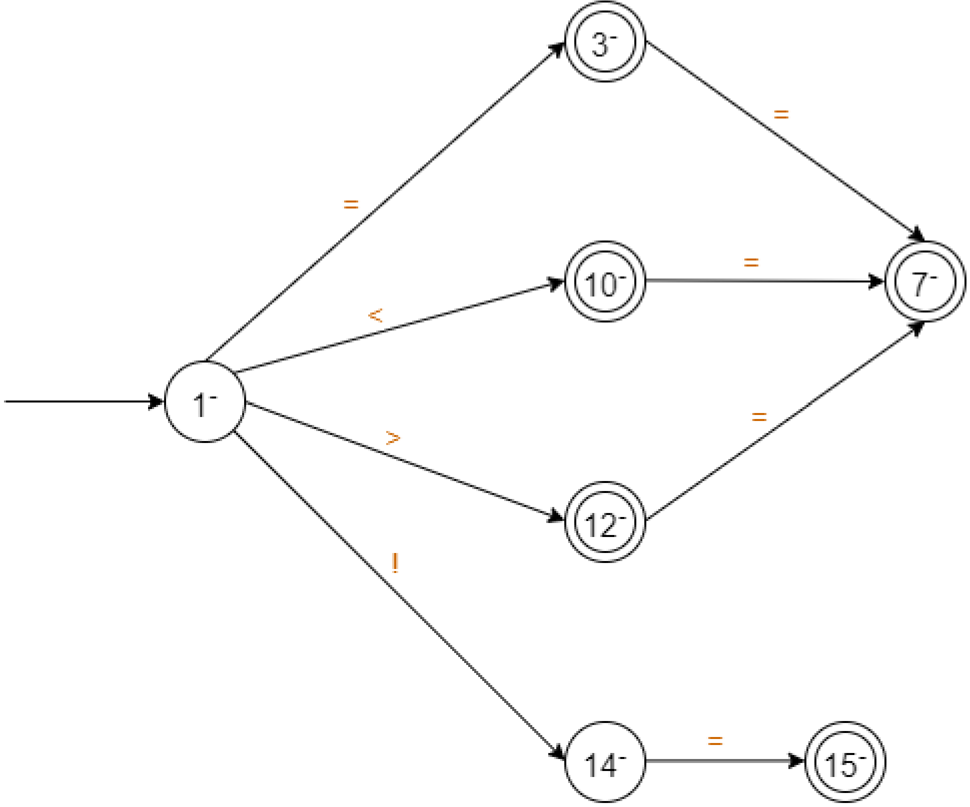


DFAs:

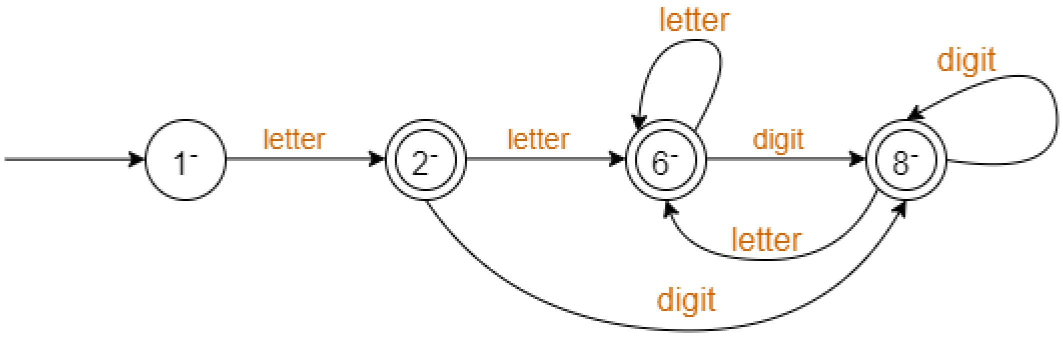
1- DFA for Constant:



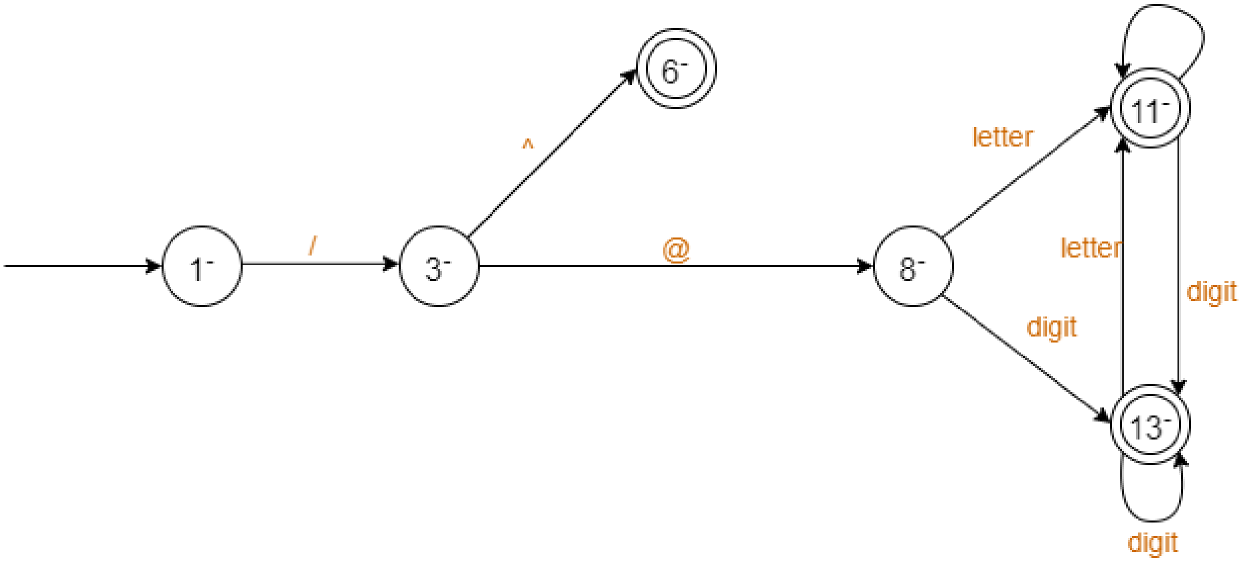
2- DFA for Relational Operators:



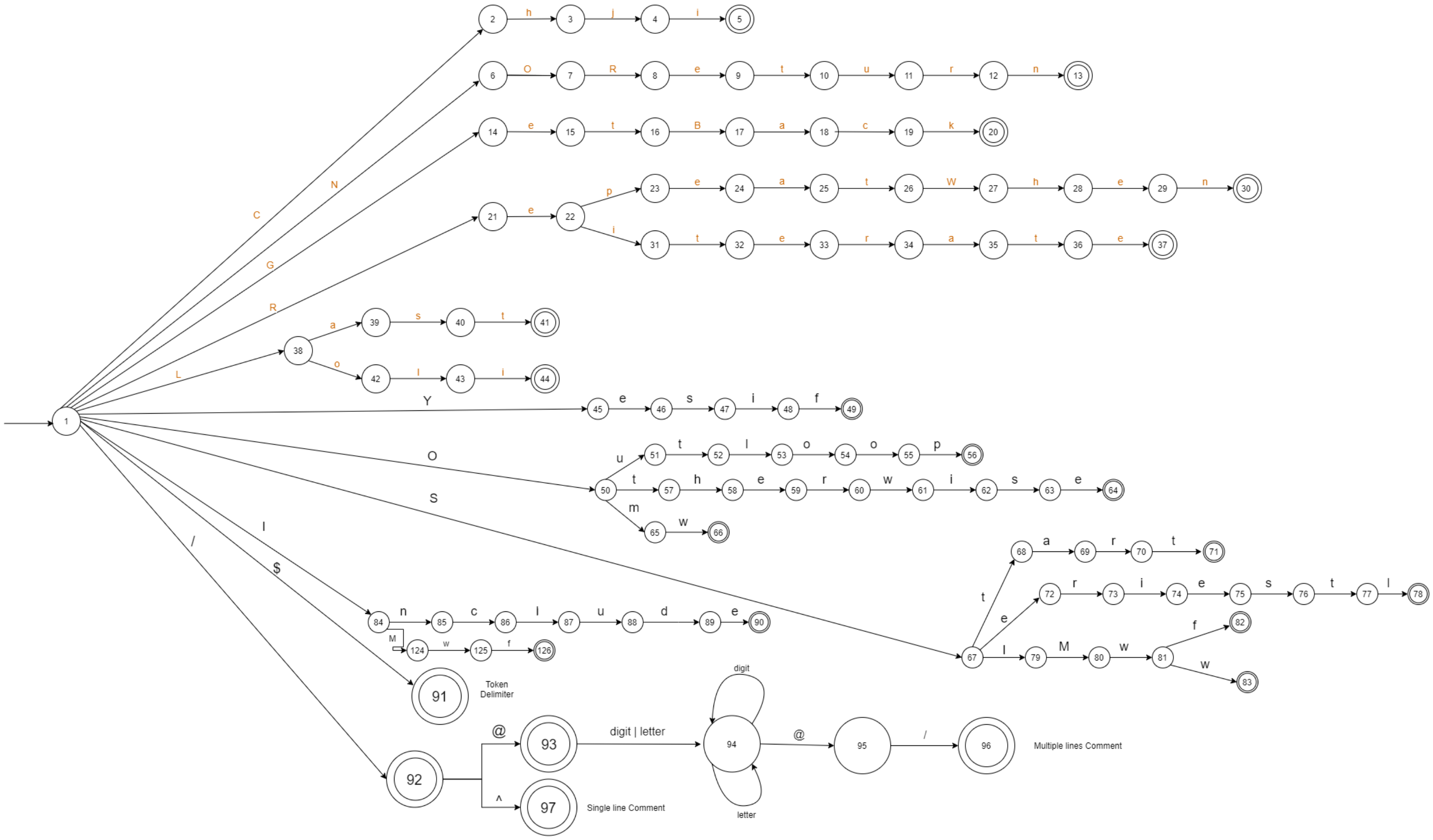
3- DFA for Identifiers:

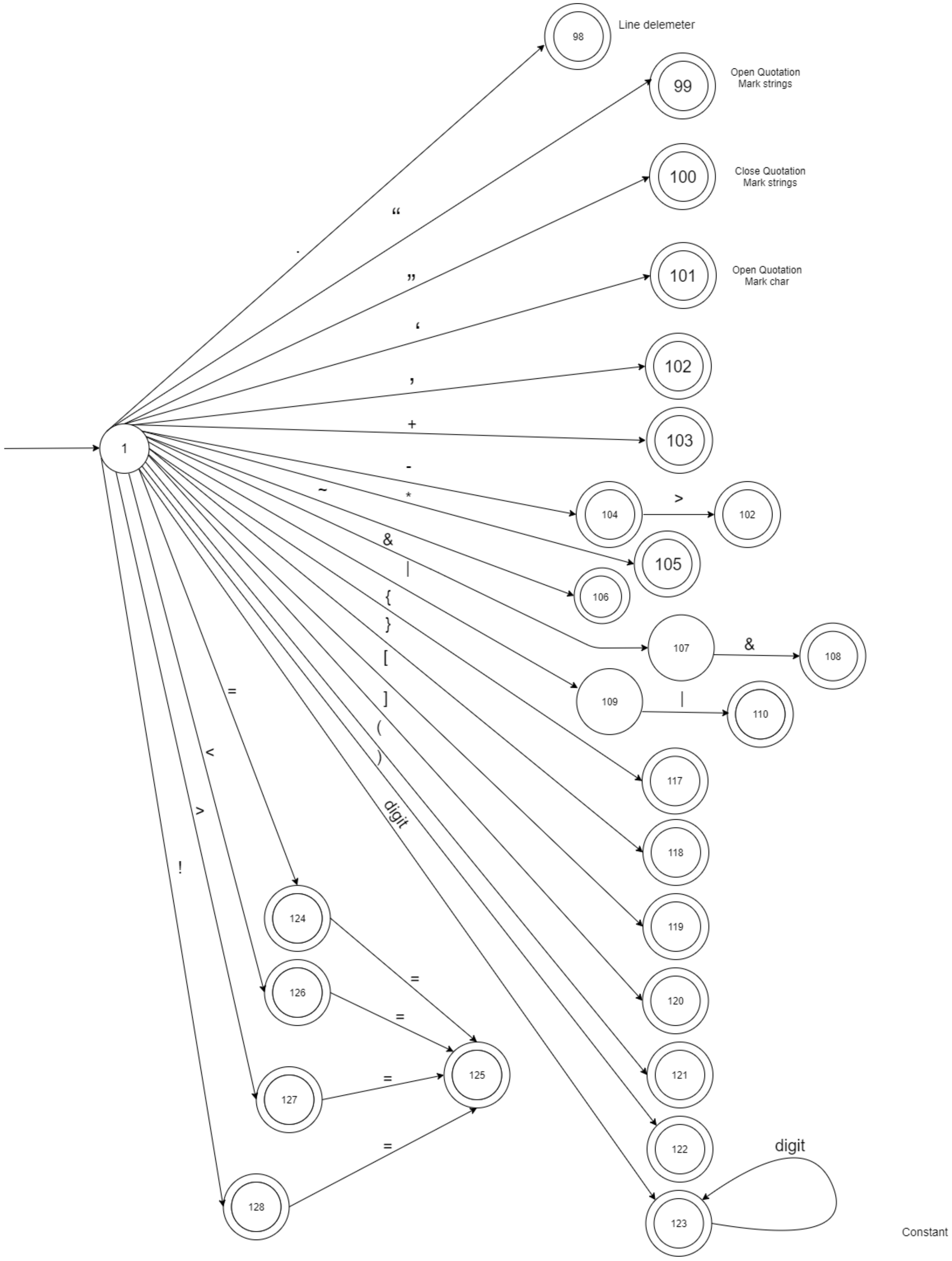


4- DFA for Comments:



5- DFA for all tokens:

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