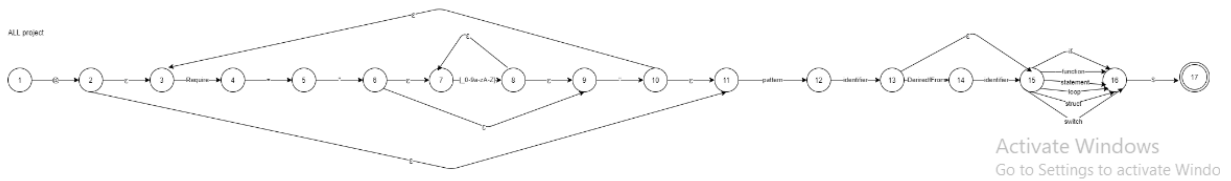


# All Used RegX

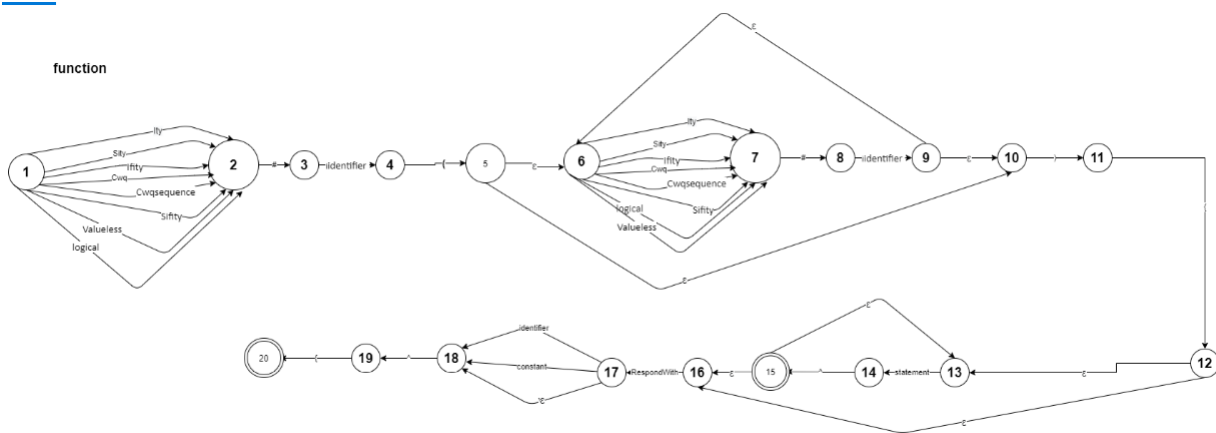
## All project

- $L(r) = @ ((Require = " ([\_A-Za-z0-9])^* ") * (Pattern\ identifier\ (DerivedFrom\ identifier)? (Function\ |\ Statement\ |\ struct\ |\ if\ |\ switch\ |\ Loop)^+ )^+ \$$

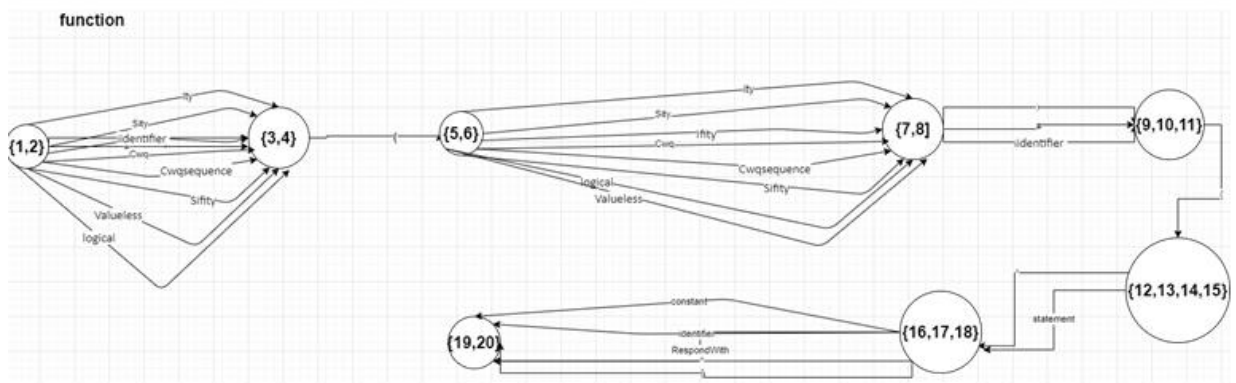


## Function

- $L(r) = (lty|Sity|Cwq|Cwqsequence|Ifity|Sifity|Valueless|logical) \# identifier \setminus ((lty|Sity|Cwq|Cwqsequence|Ifity|Sifity|Valueless|logical) \# identifier ,)^* \setminus \{ (Statements \wedge)^* Respondwith (identifier| constant | \epsilon )^* \}$

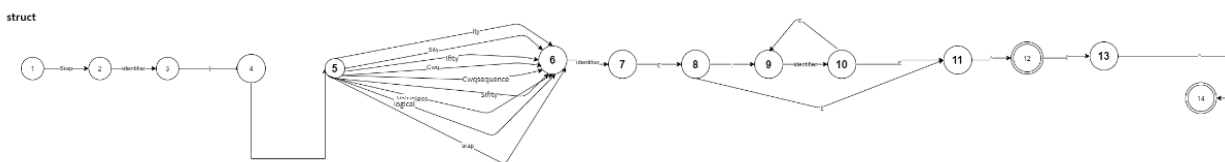


|               |            |            |            | DFA        | Function   | Transition Table |            |            |            |               |           |
|---------------|------------|------------|------------|------------|------------|------------------|------------|------------|------------|---------------|-----------|
| State         | DataType   | identifier | #          | Statement  | Constant   | RespondW         | (          | )          | {          | }             | ^         |
| {1,2}         | 2          | {1,2}      | {1,2}      | {1,2}      | {1,2}      | {1,2}            | {1,2}      | {1,2}      | {1,2}      | {1,2}         | {1,2}     |
| {3,4}         | {3,4}      | {3,4}      | 3          | {3,4}      | {3,4}      | {3,4}            | {3,4}      | {3,4}      | {3,4}      | {3,4}         | {3,4}     |
| {7,8}         | {7,8}      | {7,8}      | 8          | {7,8}      | {7,8}      | {7,8}            | {7,8}      | {7,8}      | {7,8}      | {7,8}         | {7,8}     |
| {9,10,11}     | {9,10,11}  | {9,10,11}  | {9,10,11}  | {9,10,11}  | {9,10,11}  | {9,10,11}        | {9,10,11}  | 11         | 12         | {9,10,11}     | {9,10,11} |
| {12,13,14,15} | 2,13,14,15 | 2,13,14,15 | 2,13,14,15 | 14         | 2,13,14,15 | 2,13,14,15       | 2,13,14,15 | 2,13,14,15 | 2,13,14,15 | {12,13,14,15} | 15        |
| {16,17,18}    | {16,17,18} | {16,17,18} | {16,17,18} | {16,17,18} | {16,17,18} | 17               | {16,17,18} | {16,17,18} | {16,17,18} | {16,17,18}    | 19        |
| {19,20}       | {19,20}    | {19,20}    | {19,20}    | {19,20}    | {19,20}    | {19,20}          | {19,20}    | {19,20}    | {19,20}    | 20            | {19,20}   |



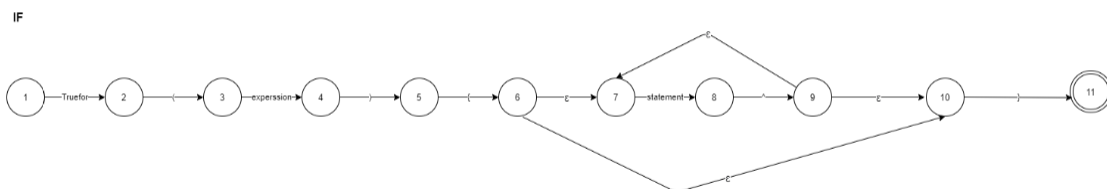
## Struct

- $L(r) = \text{Srap identifier} \setminus \{ ( ( \text{ity} | \text{Sity} | \text{Cwq} | \text{Cwqsequence} | \text{Ifity} | \text{Sifity} | \text{Valueless} | \text{logical} | \text{Srap} ) \text{ identifier } ( , \text{identifier} )^* \wedge ) + \setminus \} \wedge$



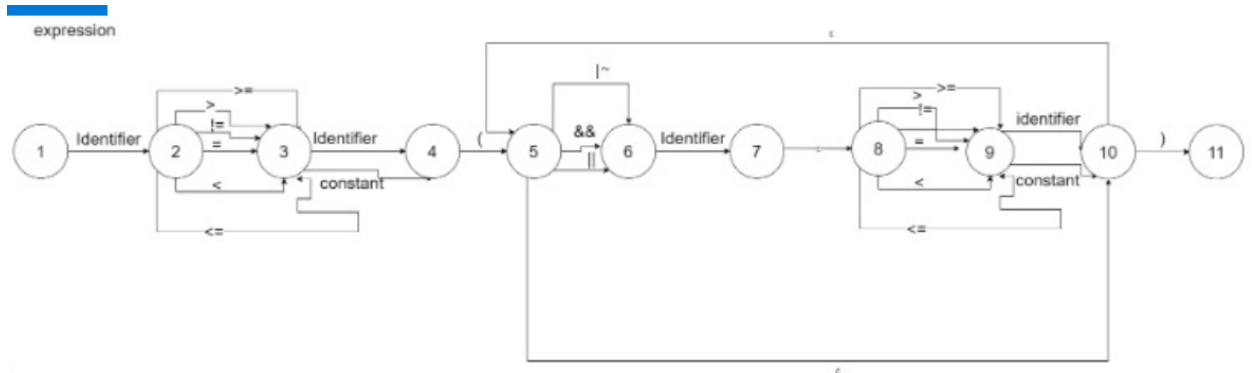
## If

- $L(r) = \text{Truefor} \setminus ( \text{expression} \setminus ) \setminus \{ \text{Statements}^* \setminus \}$



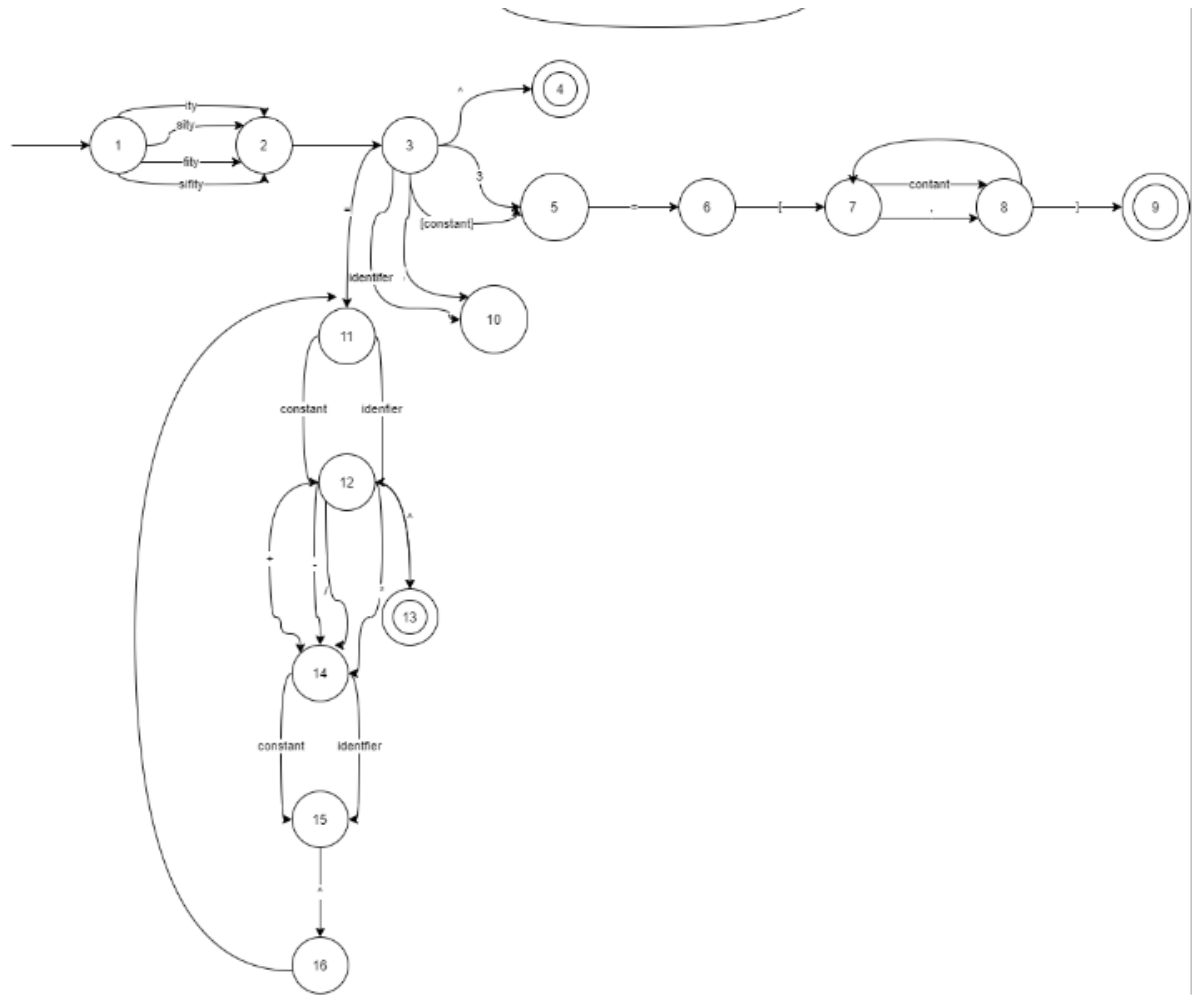
## Expression

- $L(r) = (\text{identifier}) (== | > | < | >= | <= | !=) (\text{identifier} | \text{constant}) ( \&\& | || | \sim ) (\text{identifier} | \text{constant})^*$

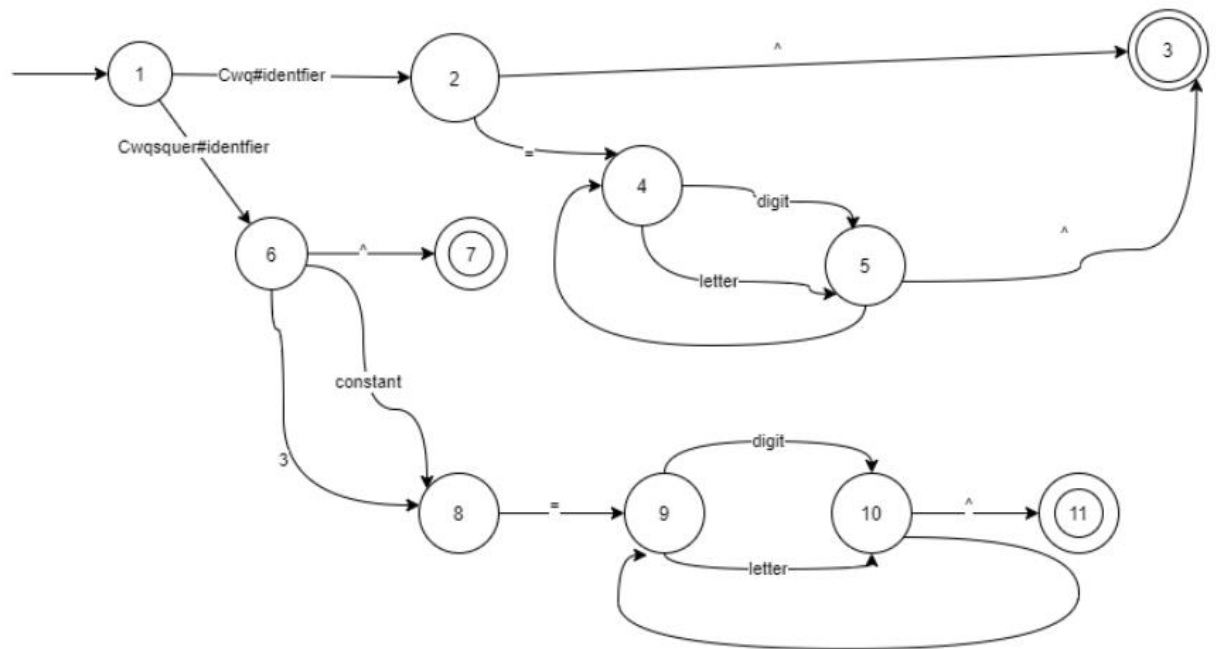


## Statements

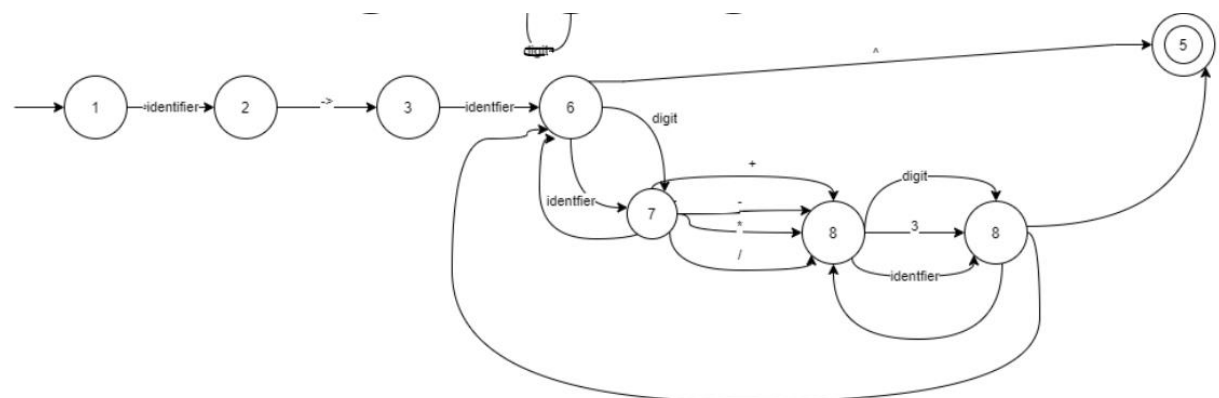
- $L(r) = ((\text{It} | \text{S} | \text{f} | \text{Sf}) \# \text{identifier})^* \text{identifier} ( \wedge | ( \text{constant} ) )? \text{constant} = \text{constant} | ( \text{constant} | ( \text{constant} )^* ) \wedge | , \text{identifier} | ( = ( \text{identifier} | \text{constant} ) ( \wedge | ( + | - | * | / ) ( \text{identifier} | \text{constant} ) )^* \wedge )^*$



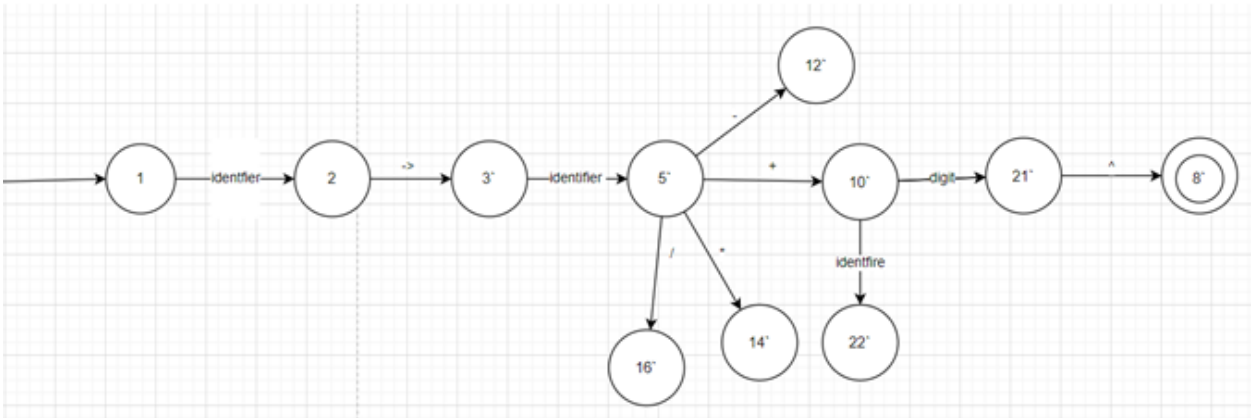
- $$L(r) = (Cwq \# identifier (^{| = '[A-Za-z0-9] ' ^ ) | Cwqsequence \# identifier (^{| | \backslash [constant \backslash ] )? \backslash [constant \backslash ] = "[A-Za-z0-9]^* " (,[A-Za-z0-9]^* )^* ] | = " [A-Za-z0-9]^* " ^ ) )^*$$



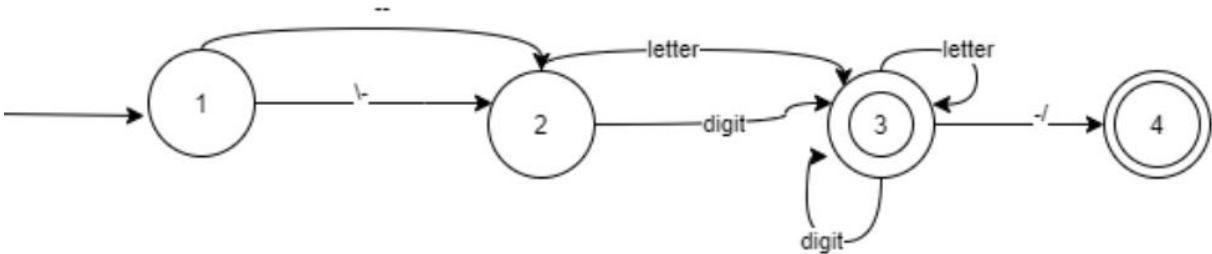
- $L(r) = ( \backslash * identifier \rightarrow identifier ( ^ | = ( identifier | digit ) | ( + | - | * | / ) ( identifier | digit ) ) ) ^ *$



|     | identifier | -> | +   | -   | *   | /   | digit | accepting |
|-----|------------|----|-----|-----|-----|-----|-------|-----------|
| 1   | 2          |    |     |     |     |     |       | no        |
| 2   |            | 3` |     |     |     |     |       | no        |
| 3`  | 5`         |    |     |     |     |     |       | no        |
| 5`  |            |    | 10` | 12` | 14` | 16` |       | no        |
| 10` | 22`        |    |     |     |     |     | 21`   | no        |
| 21` | 8`         |    |     |     |     |     |       | no        |

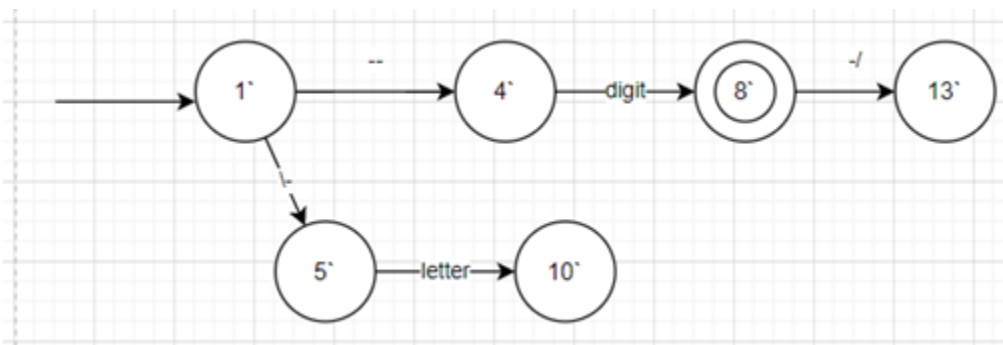


- $L(r) = L(r) = ( (-- \mid \backslash -) ([\_A-Za-z0-9])^* (-/)? )^*$



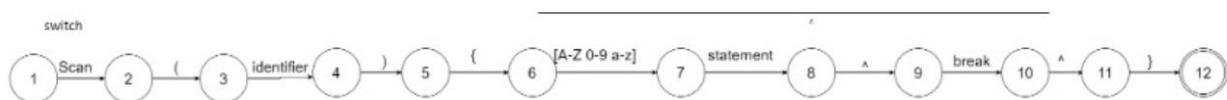
|  | -- | -/ | digit | letter | accepting |
|--|----|----|-------|--------|-----------|
|--|----|----|-------|--------|-----------|

|    |    |     |    |     |     |
|----|----|-----|----|-----|-----|
| 1` | 4` |     |    |     | no  |
| 4` |    |     | 8` |     | yes |
| 8` |    | 13` |    |     | no  |
| 5` |    |     |    | 10` | no  |



## Switch

- $L(r) = \text{Scan} \setminus (\text{identifier} \setminus) \setminus \{ (\text{Condition of } [A-Z-0-9-a-z] : (\text{statement}^+ \text{ break}^+)^+ \setminus) \}$



## Loop

- $L(r) = \text{Whatever} \setminus (\text{expression}^+ \setminus) \setminus \{ (\text{statements}^+)^* \setminus \}$

