

Tiny language

TeamID 7

Amr Hany: 2023170410

Jana Waleed: 2023170166

Mariam Hassan: 2023170582

Ahmed Atta: 2023170052

Mariam Sherif: 2023170589

Farah Younis: 2023170426

Token Classes

1-Reserved Keywords

| Lexeme | Token Class |
|--------|-------------|
| int | Int |
| float | Float |
| read | Read |
| write | Write |
| repeat | Repeat |
| until | Until |
| if | If |
| elseif | Elseif |
| else | Else |
| then | Then |
| endl | Endl |
| string | String |
| return | Return |

2-Logical Operators

| Lexeme | Token |
|--------|-------|
| && | AndOp |
| | OrOp |

3-Brackets & Symbols

| Lexeme | Token |
|--------|--------------|
| ; | Semicolon |
| , | Comma |
| (| LParanthesis |
|) | Rparanthesis |
| { | LCurl |
| } | RCurl |

4-Comparison & Assignment Operators

| Lexeme | Token Class |
|--------|---------------|
| = | EqualOp |
| := | AssignmentOp |
| < | LessThanOp |
| > | GreaterThanOp |
| <> | NotEqualOp |

5-Arithmetic Operators

| Lexeme | Token Class |
|--------|-------------|
| + | PlusOp |
| - | MinusOp |
| * | MultiplyOp |
| / | DivideOp |

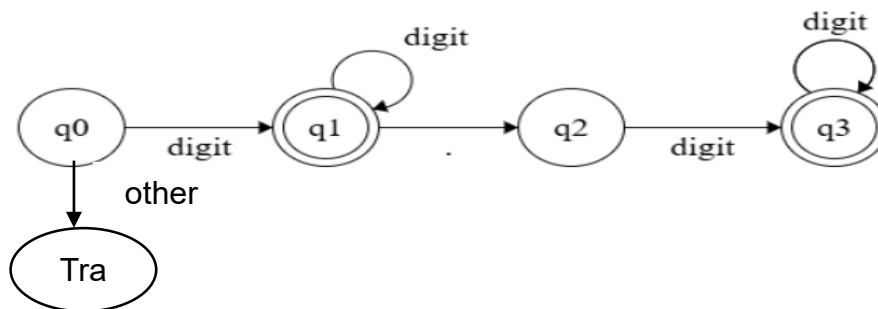
6-String, comment, number, identifier

| category | Token class | Description |
|-------------|-------------|---|
| "String" | StringElem | Any text between two double Quotes |
| Identifier | Identifier | Start with letter followed by letters or digits |
| /*comment*/ | Comment | Any text between /* and */ |
| Number | Number | Integer, float |

DFA

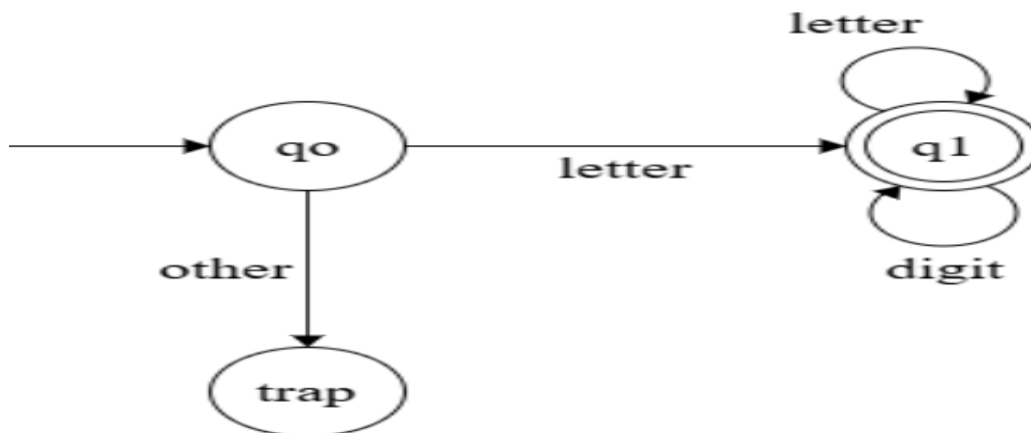
1-Number

Regex: $\text{digit}^+(\text{./digit}^+)?$



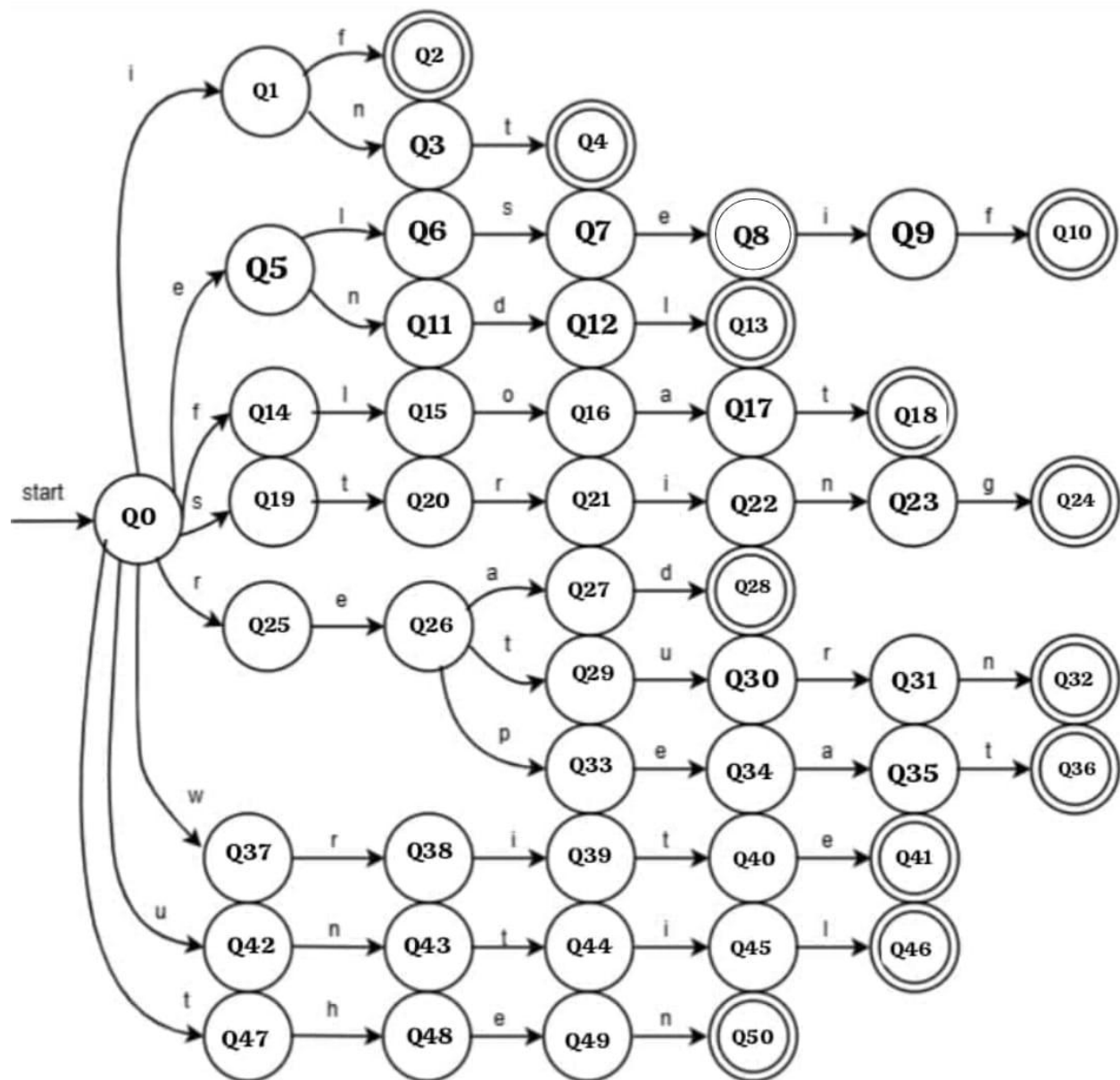
2-Identifier

Regex: $\text{letter}(\text{letter}|\text{digit})^*$



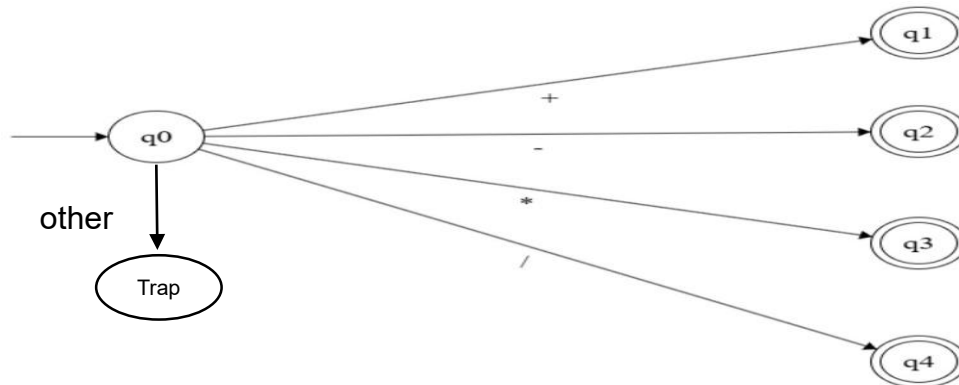
3-Reserved Keywords

Regex: Reserved_Keywords: /b int | float | string | read | write | repeat | until | if | elseif | else | then | return | endl /b



4-Arithmetic operators

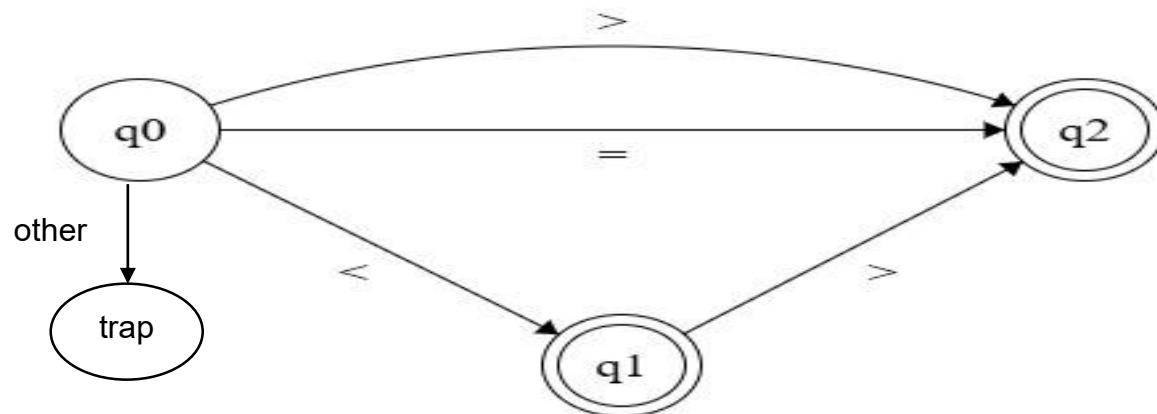
Regex: $(+|-|*|/)$



5-ConditionOperators

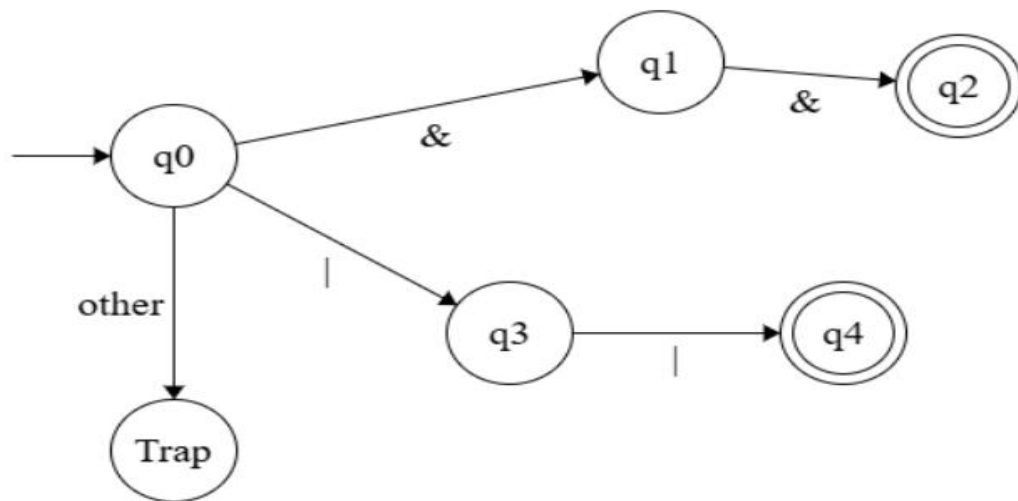
Regex: $(<|>|=|<>)$

DFA:



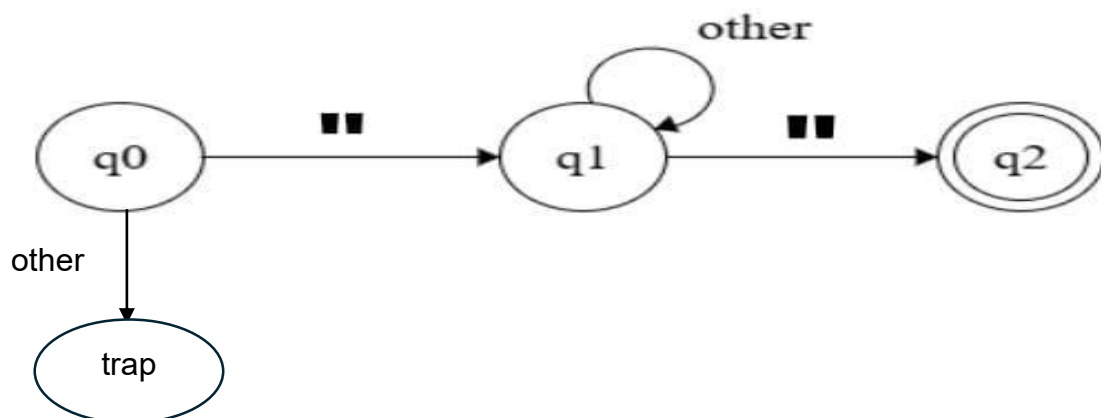
6-Boolean_Operator

Regex: (&& | ||)



7-String

Regex: ".*"



8-Comment

Regex: `/*.**/`

