

MS1

Task 1:

Tiny Language Regular Expression Rules

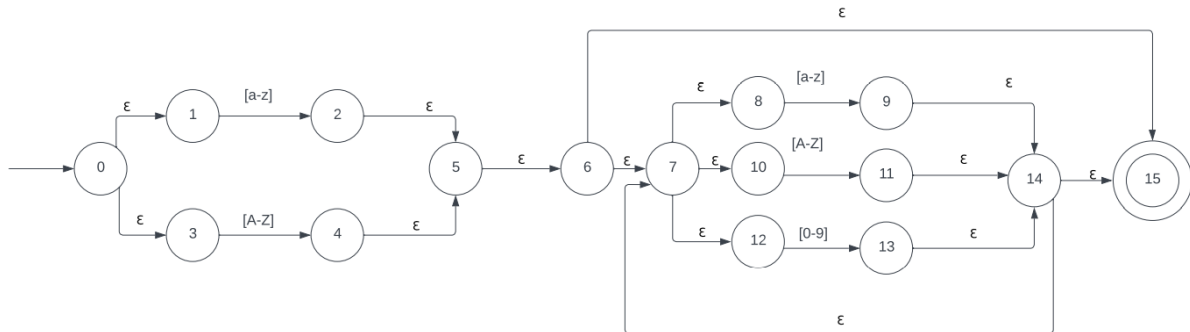
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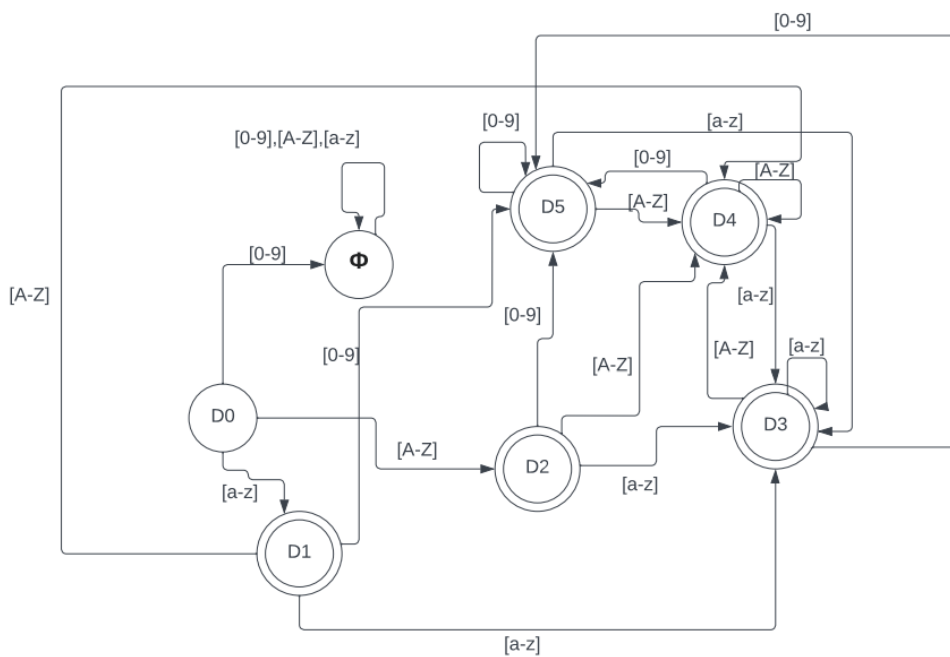
NUM	STATEMENT	REGULAR EXPRESSION
1	Number	Digit := [0-9] unSigned := (Digit)+ Signed := (+ -)? unSigned Float := (Signed)(\.)(unSigned) Number := (Signed Float)
2	String	Letter := [_ A-Z a-z] Arithmetic_Operator := [* / - + >> <<] Sympols := (< > ~ . ! @ # % ^ & () { } ' ; : = \ ?) String := (") (Letter Digit Arithmetic_Operator Sympols)* (")
3	Reserved_Keywords	Reserved_Keywords := (int float string read write repeat until if elseif else then return endl)
4	Comment_Statemet	Comment_Statement := /* ([a-z] [A-Z] [0-9] Arithmetic_Operator Condition_Operator Boolean_Operator Sympols ") * */
5	Identifiers	Identifiers := ([a-z] [A-Z]) ([a-z] [A-Z] [0-9])*
6	Arithmetic_Operator	Arithmetic_Operator:= (/ \+ \- *)
7	Condition_Operator	Condition_Operator := < > = <>
8	Boolean_Operator	Boolean_Operator := && (\ \)
9	Assignment operator	Assignment_Operator := (:=)

Identifier

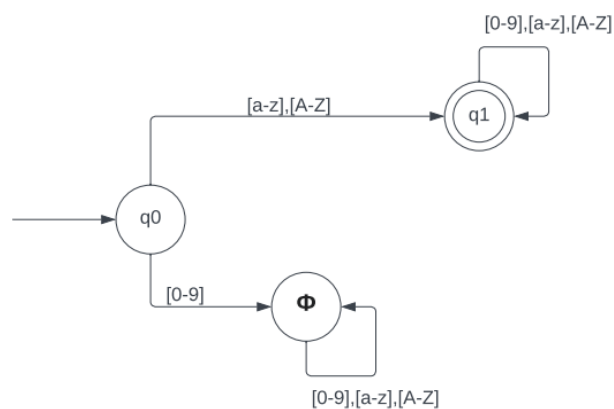
1) NFA using Thompson's construction



2) DFA using Subset construction

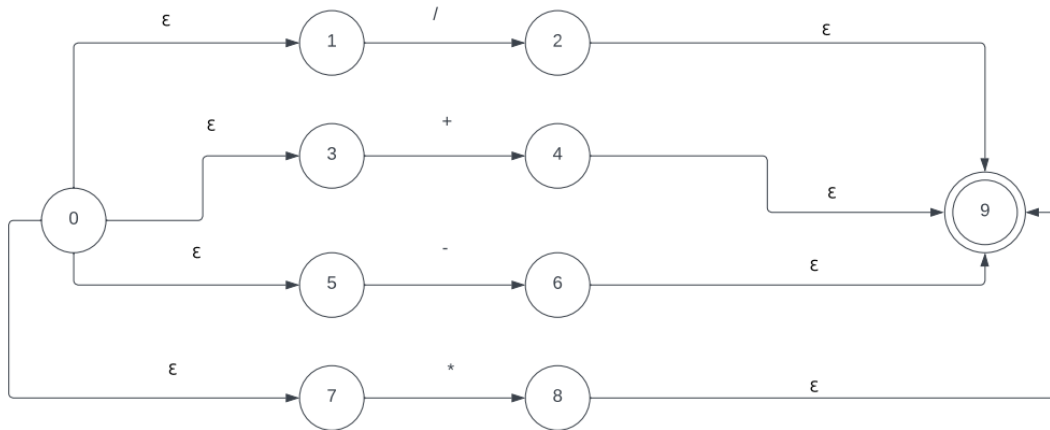


3) Minimized DFA

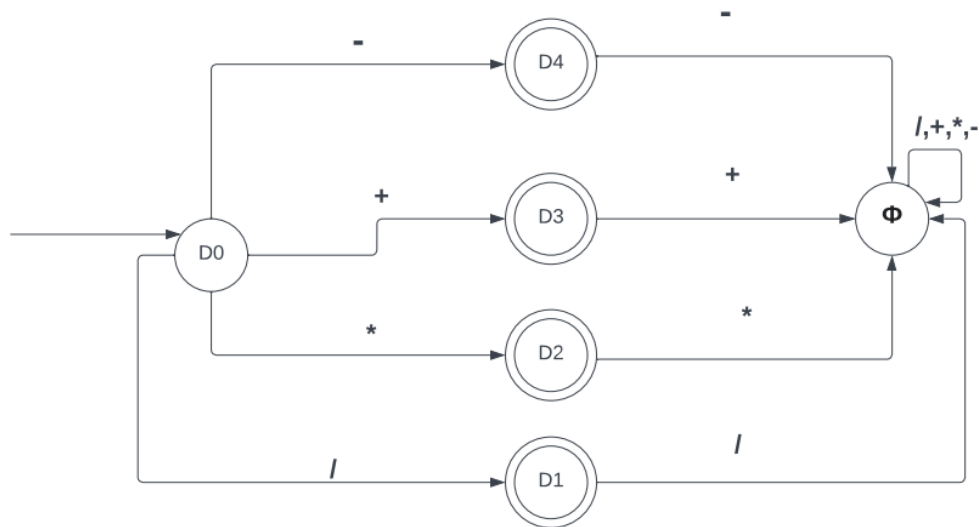


Arithmetic Operators

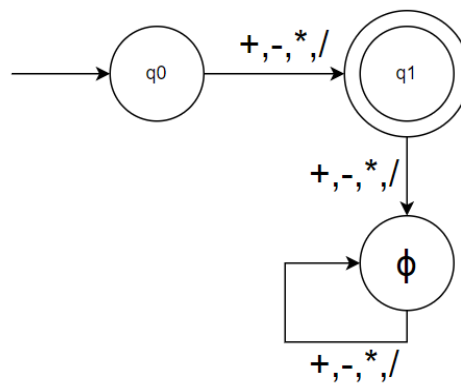
1) NFA using Thompson's construction



2) NFA using Subset construction

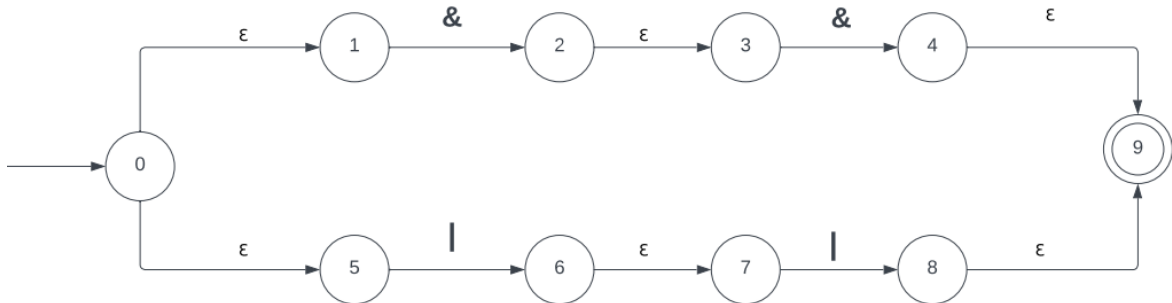


3) Minimized DFA

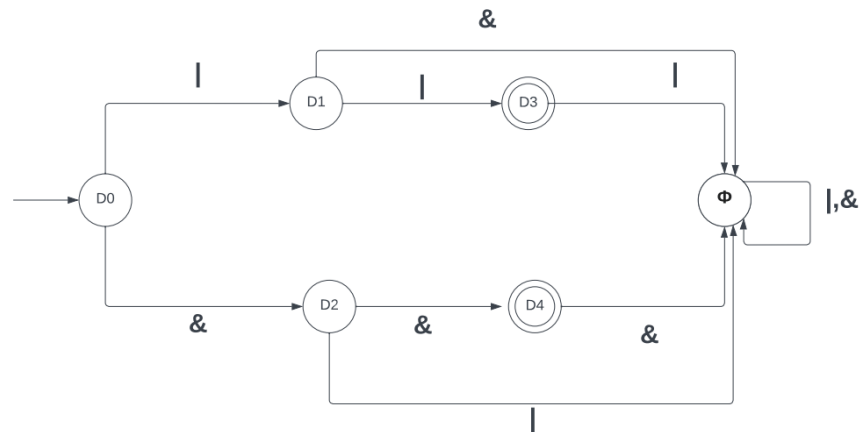


Boolean Operators

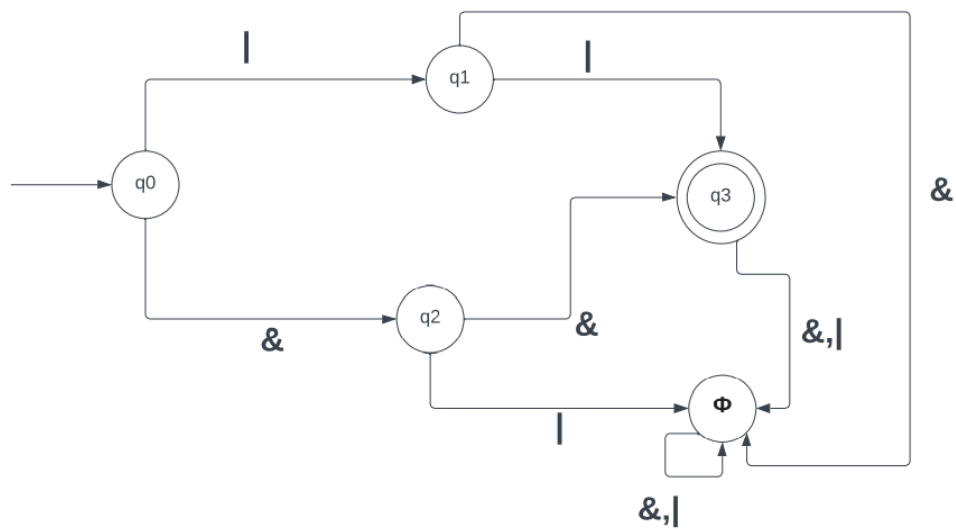
1) NFA using Thompson's construction



2) DFA using Subset construction

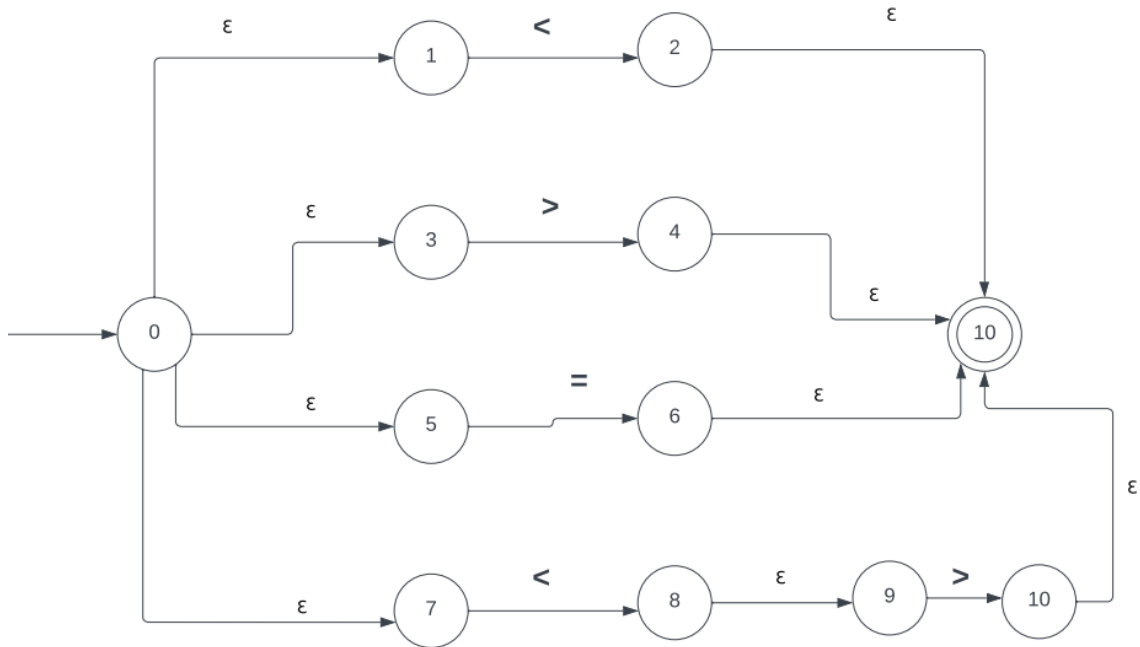


3) Minimized DFA

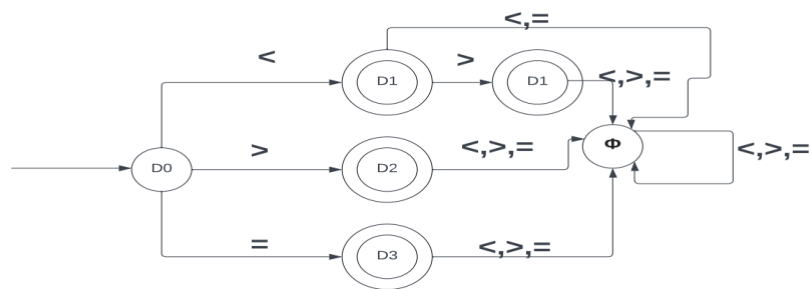


Condition Operators

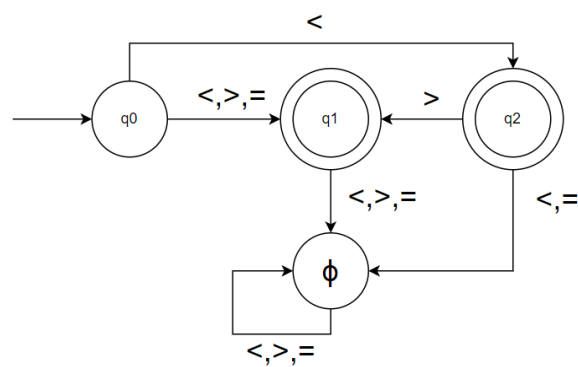
1) NFA using Thompson's construction



2) DFA using Subset construction

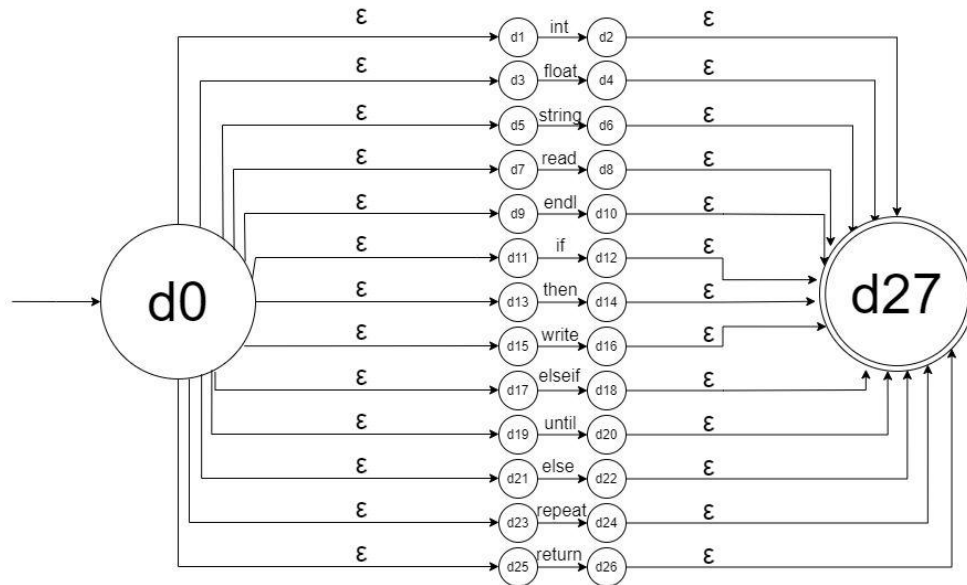


3) Minimized DFA

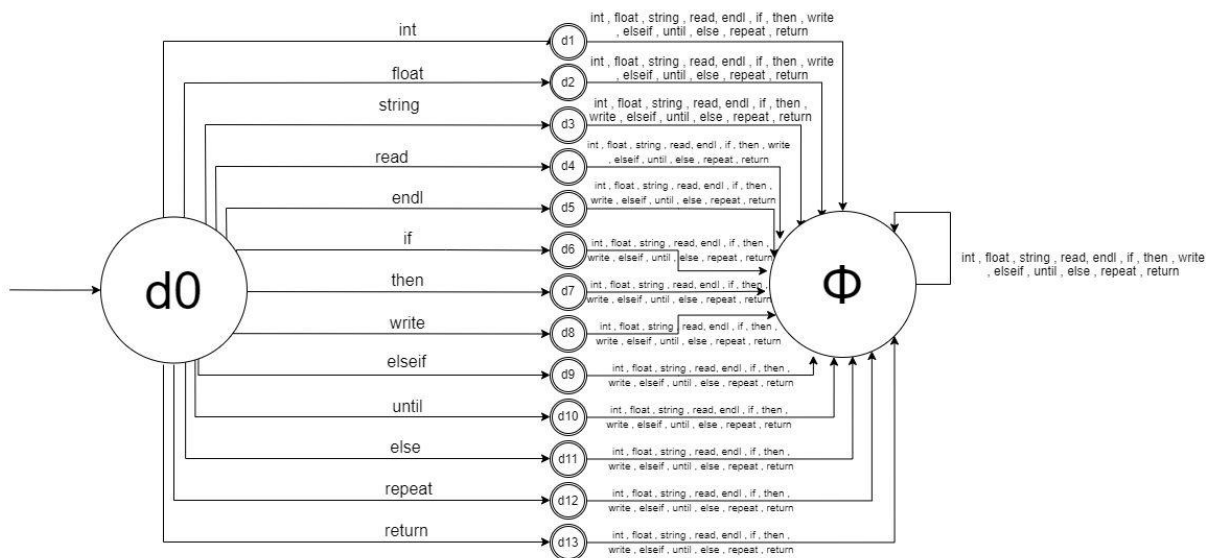


Reserved Words

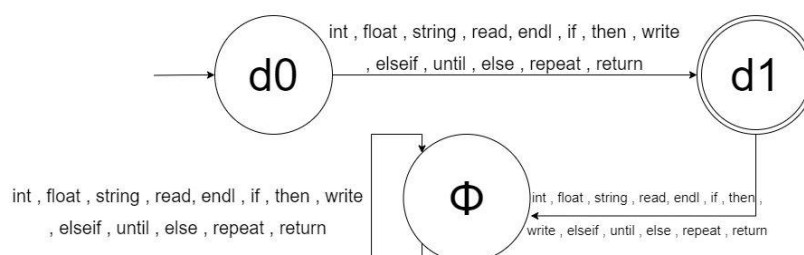
1) NFA using Thompson's construction



2) DFA using Subset construction

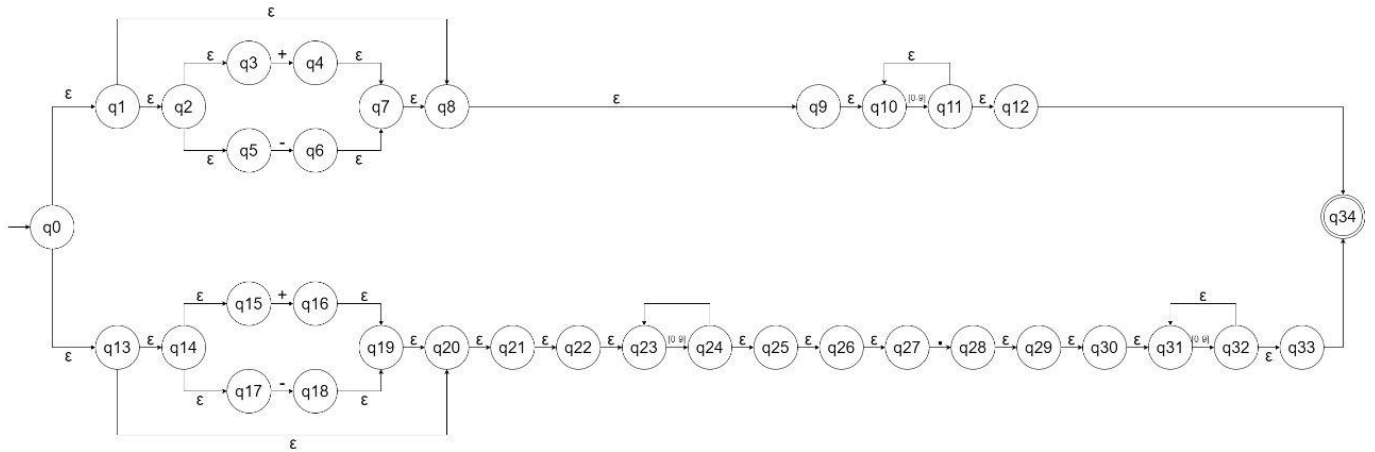


3) Minimized DFA

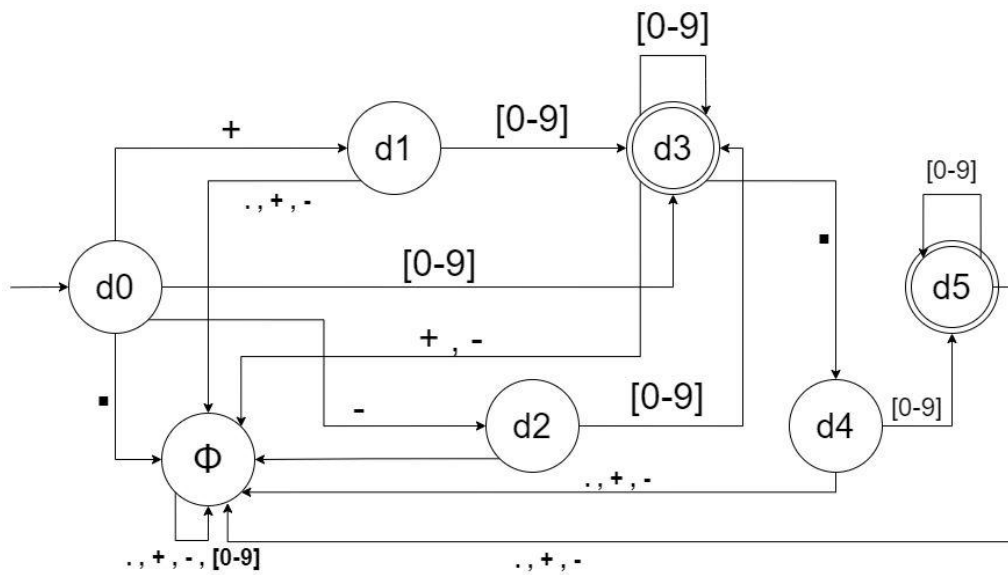


Number

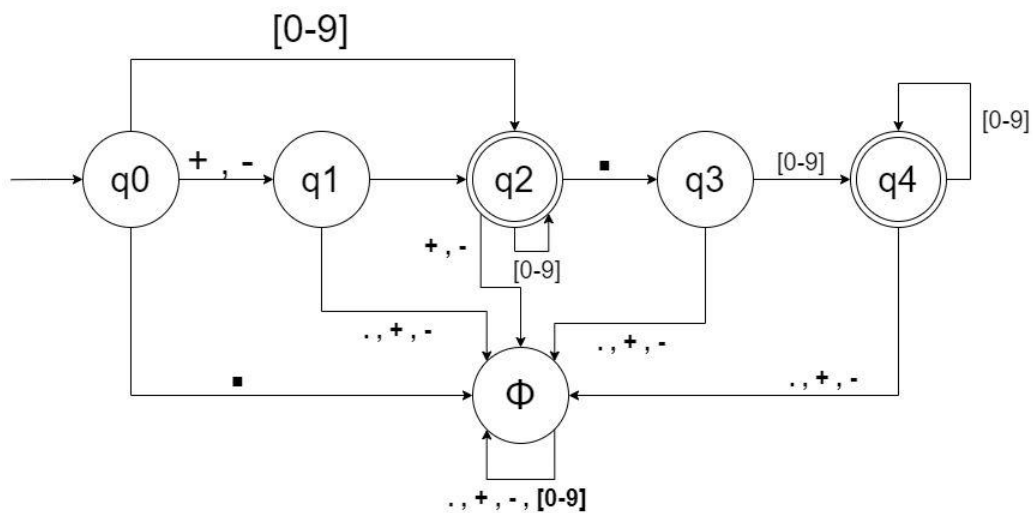
1) NFA using Thompson's construction



2) DFA using Subset construction

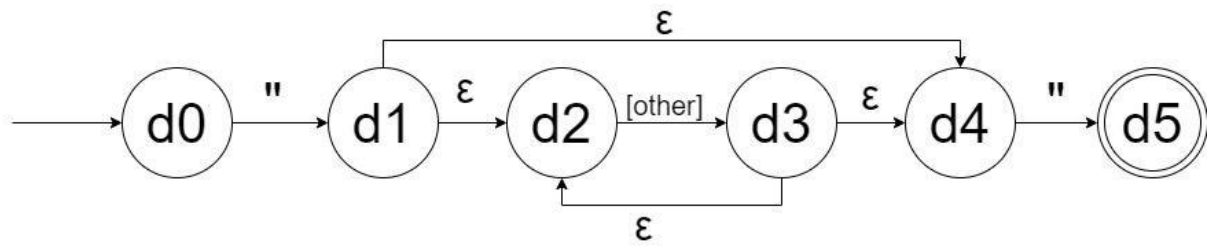


3) Minimized DFA

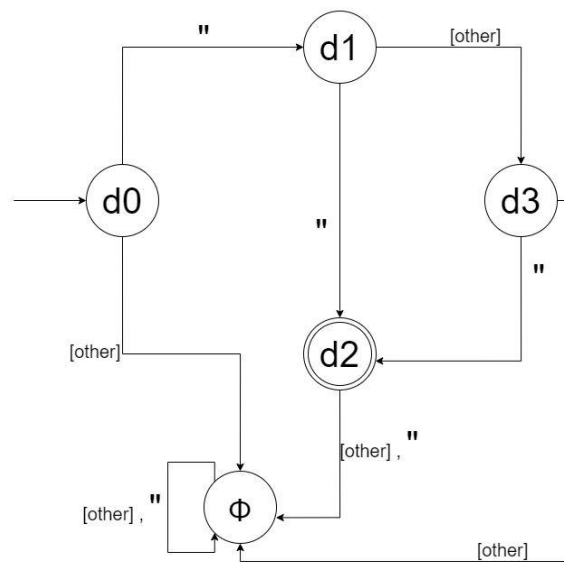


String

1) NFA using Thompson's construction



2) DFA using Subset construction

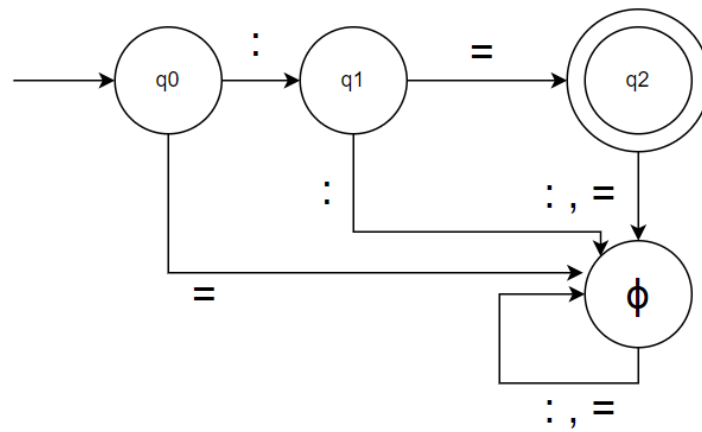


Assignment operator

1) NFA using Thompson's construction

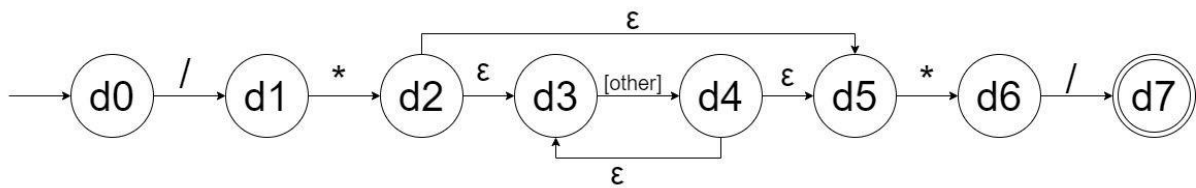


2) DFA using Subset construction

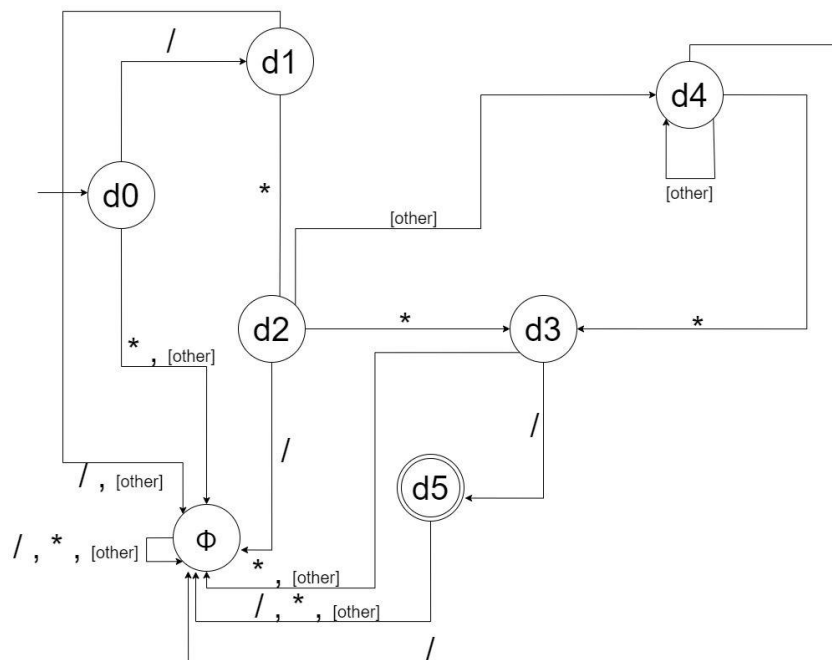


Comment

1) NFA using Thompson's construction



2) DFA using Subset construction



3) Minimized DFA

