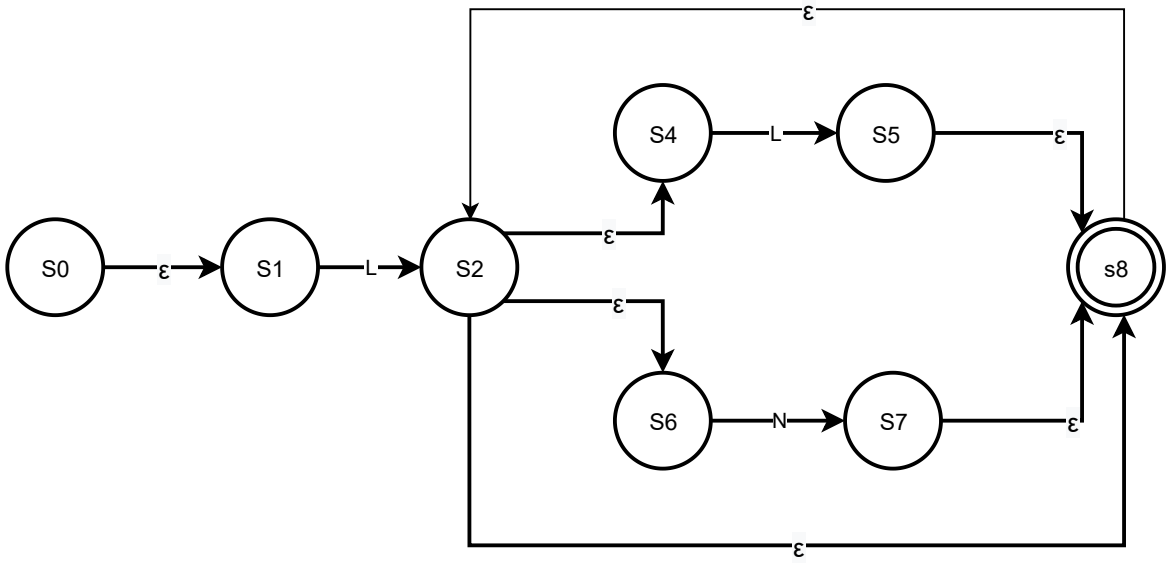
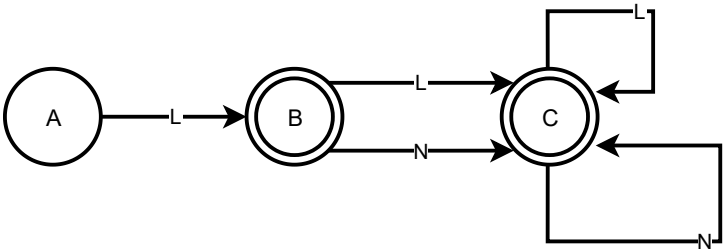


L = {(A-Z),(a-z)}  
N = {0-9}  
E.R de un Identificador: L(L | N)\*



| FT | $\epsilon$    | L        | N        |
|----|---------------|----------|----------|
| S0 | S1=A          | (A,L)=S2 | (A,N)=   |
| S2 | S4,S6,S8=B    | (B,L)=S5 | (B,N)=S7 |
| S5 | S2,S4,S6,S8=C | (C,L)=S5 | (C,N)=S7 |
| S7 | S2,S4,S6,S8=C |          |          |

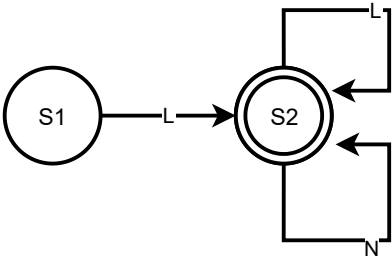
|   | L | N |
|---|---|---|
| A | B |   |
| B | C | C |
| C | C | C |



OPTIMIZACION DEL AFD IDENTIFICADOR

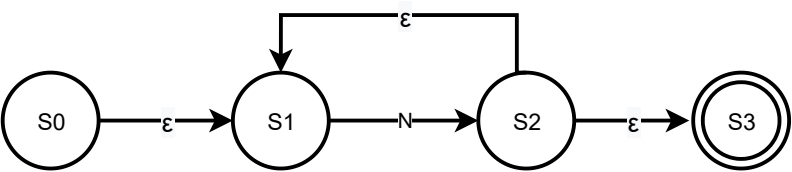
|                      | Estados de no aceptacion | Estados de aceptacion |   |
|----------------------|--------------------------|-----------------------|---|
| $\Sigma \setminus Q$ | A                        | B                     | C |
| L                    | B                        | C                     | C |
| N                    |                          | C                     | C |

|                      | Estados de no aceptacion | Estados de aceptacion |
|----------------------|--------------------------|-----------------------|
| $\Sigma \setminus Q$ | S1={A}                   | S2={B,C}              |
| L                    | S2                       | S2                    |
| N                    |                          | S2                    |



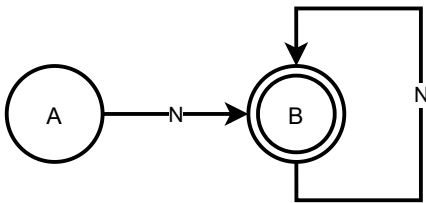
AFD de un indicador:  
1.  $Q = \{ S1, S2 \}$   
2. S1  
3.  $\Sigma = \{ L, N \}$   
4.  $F = \{ S2 \}$   
5. Función de transición  
 $\partial(S1, L) = S2$   $\partial(S1, N) =$   
 $\partial(S2, L) = S2$   $\partial(S2, N) = S2$

N = { (0-9) }  
E.R de un Numero: N+



| FT | $\epsilon$ | N        |
|----|------------|----------|
| S0 | S1=A       | (A,N)=S2 |
| S2 | S1,S3=B    | (B,N)=S2 |

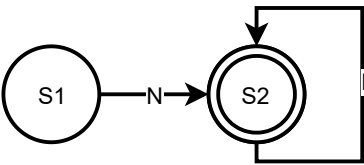
|   | N |
|---|---|
| A | B |
| B | B |



OPTIMIZACION DEL AFD NUMERO

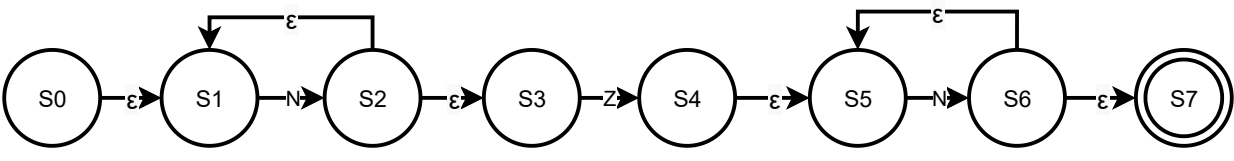
|                      | Estados de no aceptacion | Estados de aceptacion |
|----------------------|--------------------------|-----------------------|
| $\Sigma \setminus Q$ | A                        | B                     |
| N                    | B                        | B                     |

|                      | Estados de no aceptacion | Estados de aceptacion |
|----------------------|--------------------------|-----------------------|
| $\Sigma \setminus Q$ | S1={A}                   | S2={B}                |
| N                    | S2                       | S2                    |



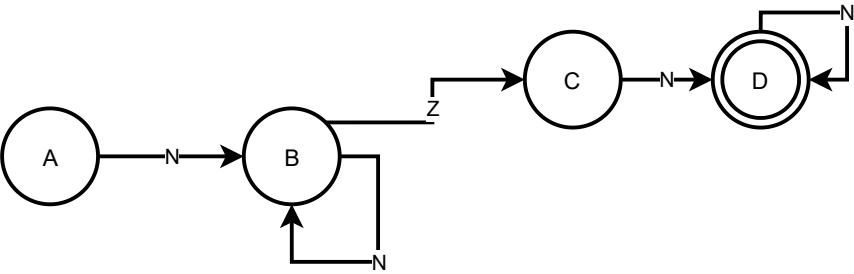
AFD de un Numero:  
1.  $Q = \{ S1, S2 \}$   
2. S1  
3.  $\Sigma = \{ N \}$   
4.  $F = \{ S2 \}$   
5. Función de transición  
 $\partial(S1, N) = S2$   $\partial(S2, N) = S2$

N = { (0-9) }  
Z = { . }  
E.R de un Decimal: N+(Z)N+



| FT | $\epsilon$ | N        | Z        |
|----|------------|----------|----------|
| S0 | S1=A       | (A,N)=S2 | (A,.)=   |
| S2 | S1,S3=B    | (B,N)=S2 | (B,.)=S4 |
| S4 | S5=C       | (C,N)=S6 | (C,.)=   |
| S6 | S5,S7=D    | (D,N)=S6 | (D,.)=   |

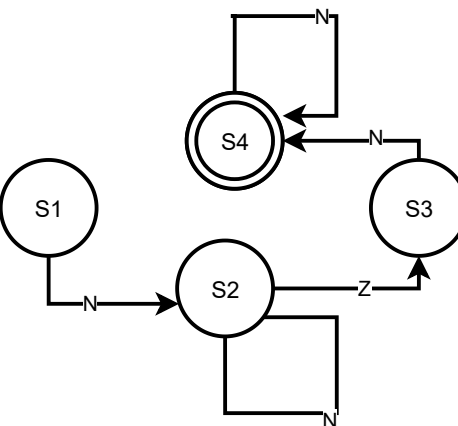
|   | N | Z |
|---|---|---|
| A | B |   |
| B | B | C |
| C | D |   |
| D | D |   |



OPTIMIZACION DEL AFD DECIMAL

|                      | Estados de no aceptacion |   |   | Estados de aceptacion |
|----------------------|--------------------------|---|---|-----------------------|
| $\Sigma \setminus Q$ | A                        | B | C | D                     |
| N                    | B                        | B | D | D                     |
| Z                    |                          | C |   |                       |

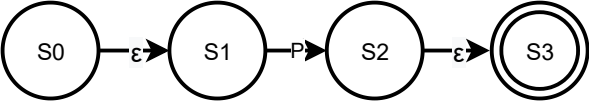
|                      | Estados de no aceptacion |        |        | Estados de aceptacion |
|----------------------|--------------------------|--------|--------|-----------------------|
| $\Sigma \setminus Q$ | S1={A}                   | S2={B} | S3={C} | S4={D}                |
| N                    | S2                       | S2     | S4     | S4                    |
| Z                    |                          | S3     |        |                       |



AFD de un Decimal:  
1.  $Q = \{ S1, S2, S3, S4 \}$   
2. S1  
3.  $\Sigma = \{ Z, N \}$   
4.  $F = \{ S4 \}$   
5. Función de transición  
 $\partial(S1, N) = S2$   $\partial(S1, .) =$   
 $\partial(S2, N) = S2$   $\partial(S2, .) = S3$   
 $\partial(S3, N) = S4$   $\partial(S3, .) =$   
 $\partial(S4, N) = S4$   $\partial(S4, .) =$

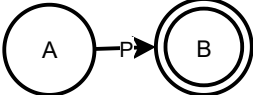
P={.,,.,,.,.}

E.R de Puntuación : P



| FT | ε    | P        |
|----|------|----------|
| S0 | S1=A | (A,P)=S2 |
| S2 | S3=B | (B,P)=   |

|   | P |
|---|---|
| A | B |
| B |   |

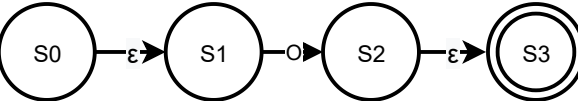


- AFD de Puntuacion:
- Q = { A,B }
  - A
  - Σ = { P }
  - F = { B }
  - Función de transición

δ(A,P) = B  
δ(B, P) =

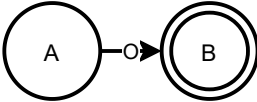
O={+,-,/,\*,%,}

E.R de Operador : O



| FT | ε    | O        |
|----|------|----------|
| S0 | S1=A | (A,O)=S2 |
| S2 | S3=B | (B,O)=   |

|   | O |
|---|---|
| A | B |
| B |   |

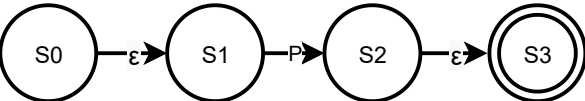


- AFD de Operador:
- Q = { A,B }
  - A
  - Σ = { O }
  - F = { B }
  - Función de transición

δ(A,O) = B  
δ(B, O) =

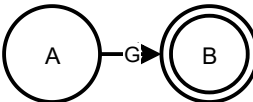
G={(, [, ], , )}

E.R de Agrupación : G



| FT | ε    | G        |
|----|------|----------|
| S0 | S1=A | (A,G)=S2 |
| S2 | S3=B | (B,G)=   |

|   | G |
|---|---|
| A | B |
| B |   |



- AFD de Agrupacion:
- Q = { A,B }
  - A
  - Σ = { G }
  - F = { B }
  - Función de transición

δ(A,G) = B  
δ(B, G) =

L = {(A-Z),(a-z)}

N = {0-9}

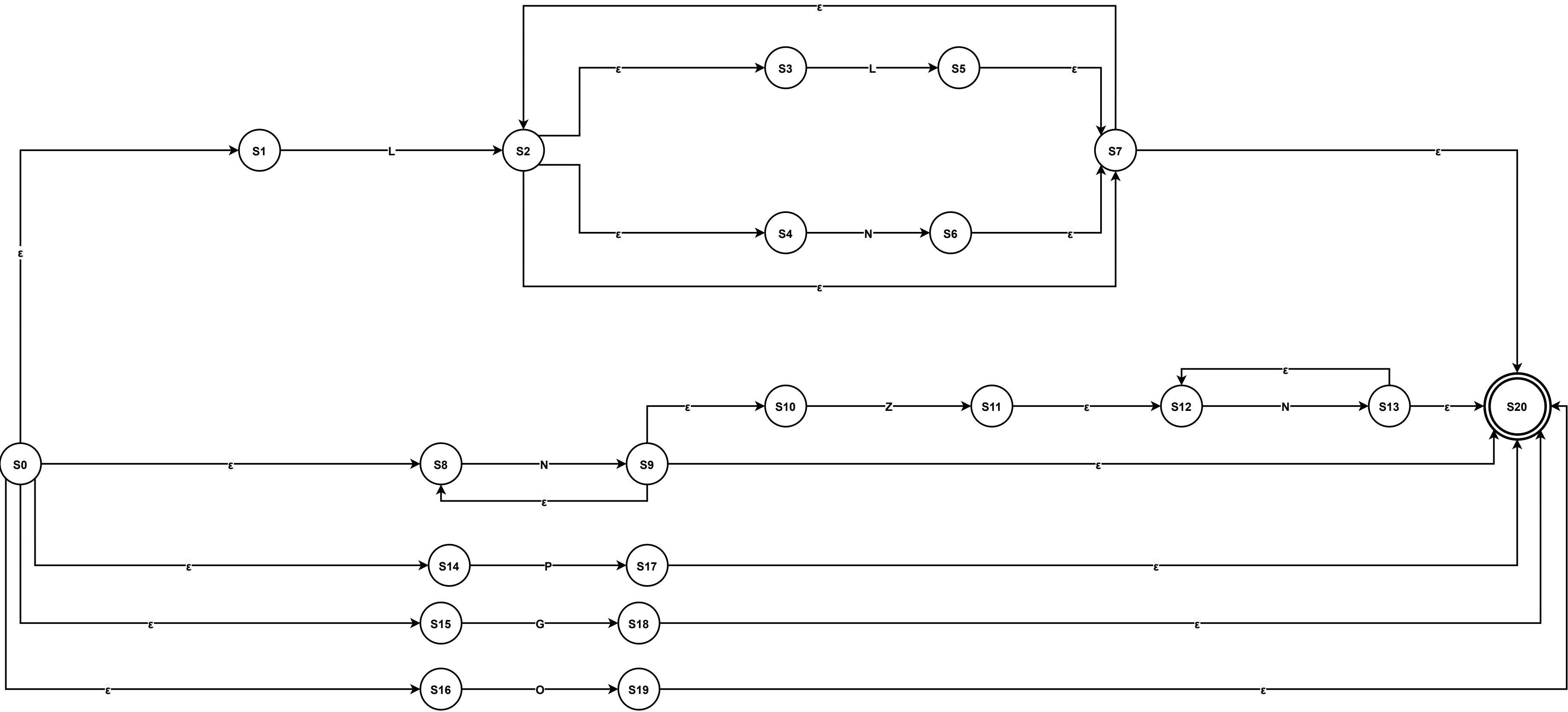
G = {(, ), [, ], {, }, }

O = {+, -, \*, /, %, }

P = {.,,.,.,.,.}

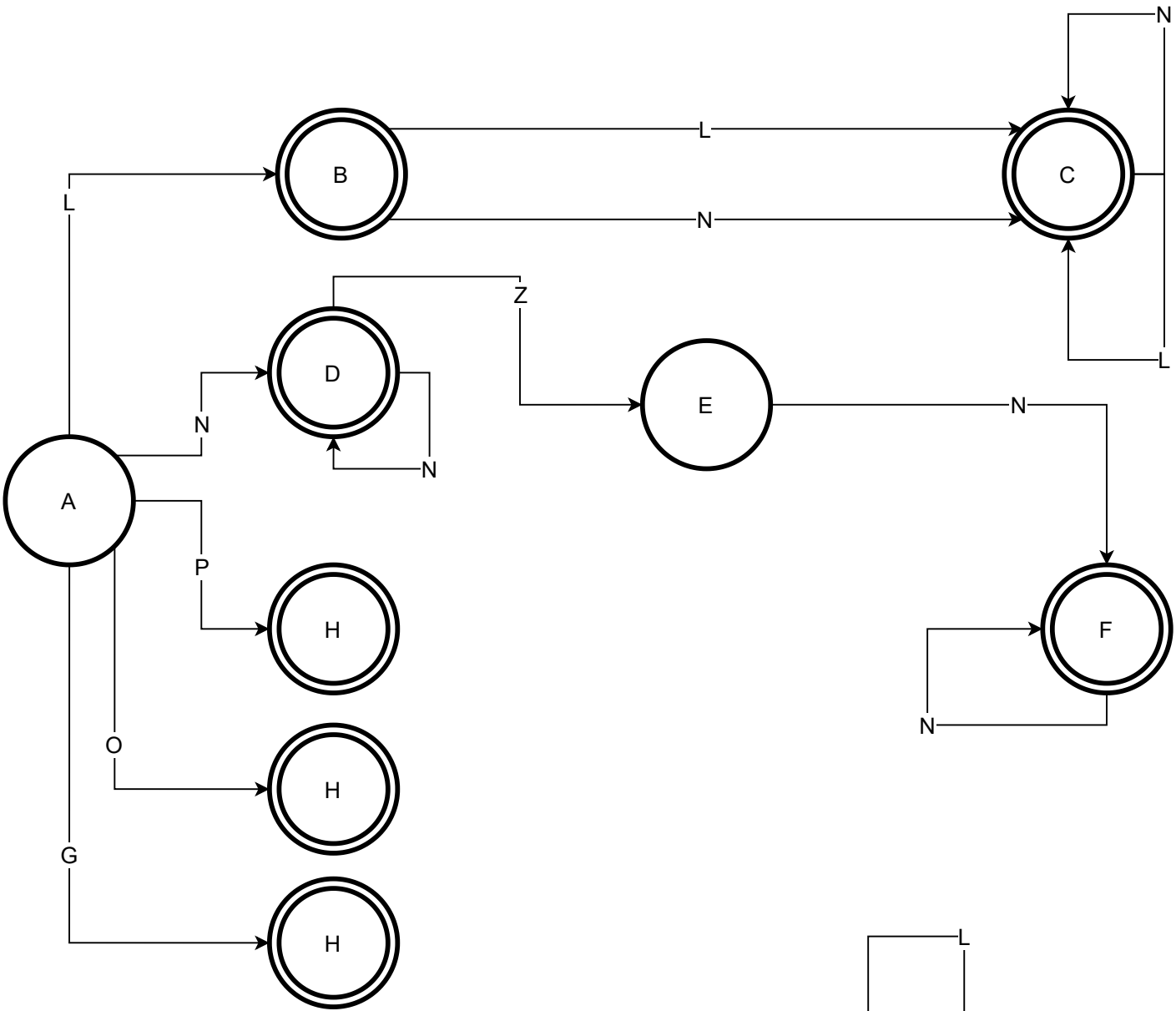
Z = {., }

E.R = {(L(L|N)\*|N+)(E|ZN+)|P|G|O}



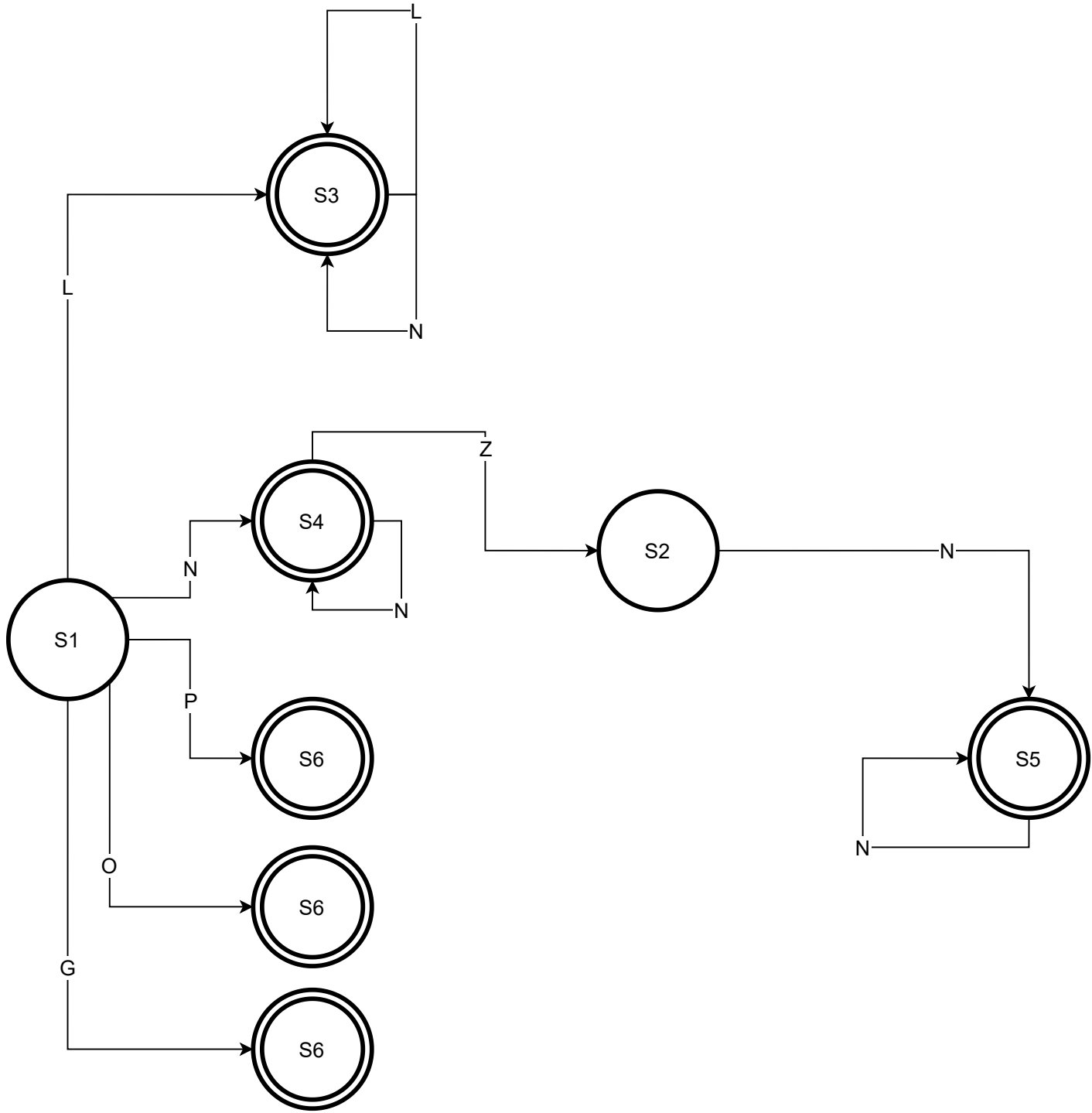
| FT      | ε                             | L            | N              | Z             | P             | G             | O             |
|---------|-------------------------------|--------------|----------------|---------------|---------------|---------------|---------------|
| SO      | S1 , S8 , S14 , S15 , S16 = A | (A , L) = S2 | (A , N) = S9   | (A , Z) =     | (A , P) = S17 | (A , G) = S18 | (A , O) = S19 |
| S2      | S3 , S4 , S7 , S20 = B        | (B , L) = S5 | (B , N) = S6   | (B , Z ) =    | (B ,P) =      | (B , G) =     | (B ,O) =      |
| S5 , S6 | S7,S2 ,S3 , S4 ,S20 = C       | (C , L) = S5 | (C , N ) = S6  | (C , Z ) =    | (C , P) =     | (C ,G ) =     | (C ,O ) =     |
| S9      | S8 , S10 , S20 = D            | (D , L) =    | (D , N) = S9   | (D , Z) = S11 | (D , P) =     | (D , G) =     | (D , O) =     |
| S11     | S12 = E                       | (E , L ) =   | (E , N ) = S13 | (E , Z) =     | (E , P) =     | (E , G) =     | (E , O) =     |
| S13     | S12 , S20 = F                 | (F , L) =    | (F , N) = S13  | (F , Z) =     | (F , P ) =    | (F , G) =     | (F , O) =     |
| S17     | S20 = H                       | (H ,L) =     | (H , N) =      | (H , Z) =     | (H ,P) =      | (H ,G) =      | (H , O) =     |
| S18     | S20 = H                       | (H ,L) =     | (H , N) =      | (H , Z) =     | (H ,P) =      | (H ,G) =      | (H , O) =     |
| S19     | S20 = H                       | (H ,L) =     | (H , N) =      | (H , Z) =     | (H ,P) =      | (H ,G) =      | (H , O) =     |

|   | L | N | Z | P | G | O |
|---|---|---|---|---|---|---|
| A | B | D | - | H | H | H |
| B | C | C | - | - | - | - |
| C | C | C | - | - | - | - |
| D | - | D | E | - | - | - |
| E | - | F | - | - | - | - |
| F | - | F | - | - | - | - |
| H | - | - | - | - | - | - |



|                       | No aceptacion |   | aceptacion |   |   |   |   |
|-----------------------|---------------|---|------------|---|---|---|---|
| $\Sigma \backslash Q$ | A             | E | B          | C | D | F | H |
| L                     | B             |   | C          | C |   |   |   |
| N                     | D             | F | C          | C | D | F |   |
| Z                     |               |   |            |   | E |   |   |
| P                     | H             |   |            |   |   |   |   |
| O                     | H             |   |            |   |   |   |   |
| G                     | H             |   |            |   |   |   |   |

|                      | No aceptación |          | aceptación |          |          |          |
|----------------------|---------------|----------|------------|----------|----------|----------|
| $\Sigma \setminus Q$ | S1 = {A}      | S2 = {E} | S3 = {B,C} | S4 = {D} | S5 = {F} | S6 = {H} |
| L                    | S3            |          | S3         |          |          |          |
| N                    | S4            | S5       | S3         | S4       | S5       |          |
| Z                    |               |          |            | S2       |          |          |
| P                    | S6            |          |            |          |          |          |
| O                    | S6            |          |            |          |          |          |
| G                    | S6            |          |            |          |          |          |



1.  $Q = \{S1 ,S2 ,S3 ,S4 ,S5 ,S6 \}$   
2.  $S2$   
3.  $Z = \{L , N ,Z , P , O ,G\}$   
4.  $F = \{S3 , S4 ,S5 ,S6\}$

$\partial (S1 , L) = S3$     $\partial (S1 , N) = S4$     $\partial (S1 , Z) =$     $\partial (S1 , P) = S6$     $\partial (S1 , O) = S6$     $\partial (S1 , G) = S6$   
 $\partial (S2 , L) =$     $\partial (S2 , N) = S5$     $\partial (S2 , Z) =$     $\partial (S2 , P) =$     $\partial (S2 , O) =$     $\partial (S2 , G) =$   
 $\partial (S3 , L) =S3$     $\partial (S3 , N) = S3$     $\partial (S3 , Z) =$     $\partial (S3 , P) =$     $\partial (S3 , O) =$     $\partial (S3 , G) =$   
 $\partial (S4 , L) =$     $\partial (S4 , N) = S4$     $\partial (S4 , Z) =S2$     $\partial (S4 , P) =$     $\partial (S4 , O) =$     $\partial (S4 , G) =$   
 $\partial (S5 , L) =$     $\partial (S5 , N) = S5$     $\partial (S5 , Z) =$     $\partial (S5 , P) =$     $\partial (S5 , O) =$     $\partial (S5 , G) =$   
 $\partial (S6 , L) =$     $\partial (S6 , N) =$     $\partial (S6 , Z) =$     $\partial (S6 , P) =$     $\partial (S6 , O) =$     $\partial (S6 , G) =$