Universidad de San Carlos de Guatemala

Centro Universitario de Occidente

División de Ciencias de la Ingeniería

Ingeniería en Ciencias y Sistemas.

Lenguajes Formales y de Programación.

Sección A

Parte Teórica-Practica

Jhony Roel Fuentes López

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Identificador

l[l|d]+

A = (Q, Σ, ∂, A, F)

1. Q = { s1,s2,s3}

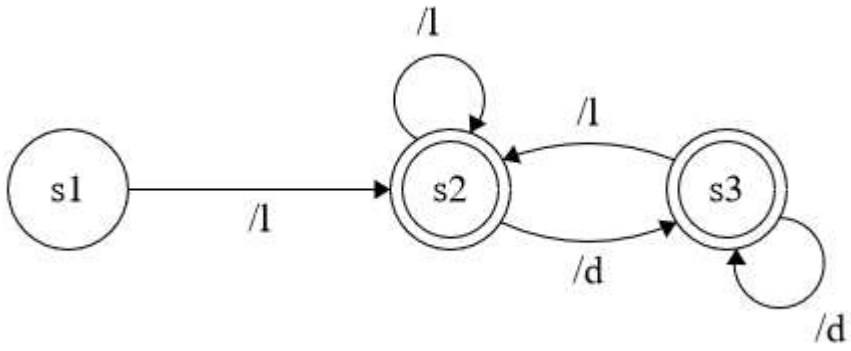
2. A={S1}

3. Σ = {/d,/l}

4. F = {s2,s3}

5. Función de Transición , ∂

∂(s1,/l) = s2	∂(S2,/d) = s3
∂(S3,/d) = s3	∂(s3,/l) = s2
∂(S2,/l) = s2	



Numero

[/d]+

A = (Q, Σ, ∂, A, F)

1. Q = { s1,s2}

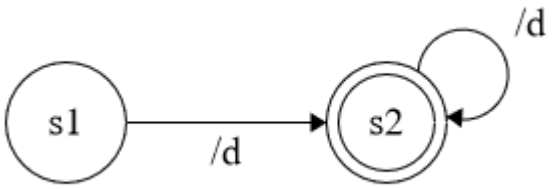
2. A={s1}

3. Σ = {/l}

4. F = {s2}

5. Función de Transición , ∂

∂(s1,/d) = s2	∂(S2,/d) = s2



Decimal

[/d]+[.][/d]+

A = (Q, Σ, ∂, A, F)

1. Q = { s1,s2,s3,s4}

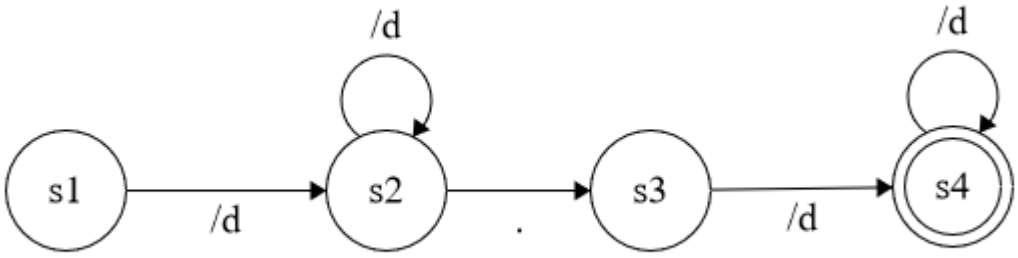
2. A={s1}

3. Σ = {/d, . }

4. F = {s4}

5. Función de Transición ∂

∂(s1,/d) = s2	∂(S2,/d) = s2
∂(S2,.) = s3	∂(s3,/d) = s4
∂(s4,/d) = s4	



Puntuación

(.|;|,|:)

A = (Q, Σ, ∂, A, F)

1. Q = { s1,s2}

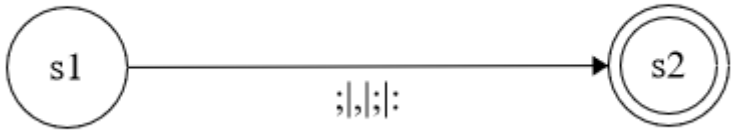
2. A={s1}

3. Σ = {.-;-:-, }

4. F = {s2}

5. Función de Transición ∂

∂(s1, .) = s2	∂(S1, ;) = s2
∂(S1 , :) = s2	∂(s1, ,) = s2



Operador

(+|-|/|*|%)

A = (Q, Σ, ∂, A, F)

1. Q = { s1,s2}

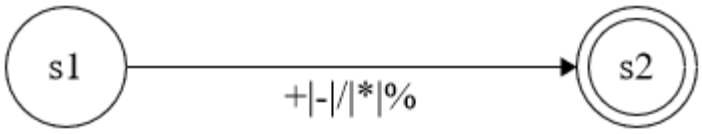
2. A={s1}

3. Σ = {+,-,*,/,% }

4. F = {s2}

5. Función de Transición ∂

∂(s1, +) = s2	∂(S1, -) = s2
∂(S1 , *) = s2	∂(s1, /) = s2
∂(S1 , %) = s2	



Agrupación

([]|()|{|})

A = (Q, Σ, ∂, A, F)

1. Q = { s1,s2}

2. A={s1}

3. Σ = {[,] , (,) {, } }

4. F = {s2}

5. Función de Transición ∂

∂(s1, [ ) = s2	∂(S1,]) = s2
∂(S1 , ( ) = s2	∂(s1,)) = s2
∂(S1 , {) = s2 ∂(S1 , }) = s2	

AFD General

(l [l |d] *) | (/d+ ([.] /d+)?) | ((+ | / | * | - |%) | (, | ; | . | :) | ({ | (|] |) | } | [ ))

A = (Q, Σ, ∂, A, F)

1. Q = { s0,s1,s2,s3,s4,s5,s6,s7,s8}

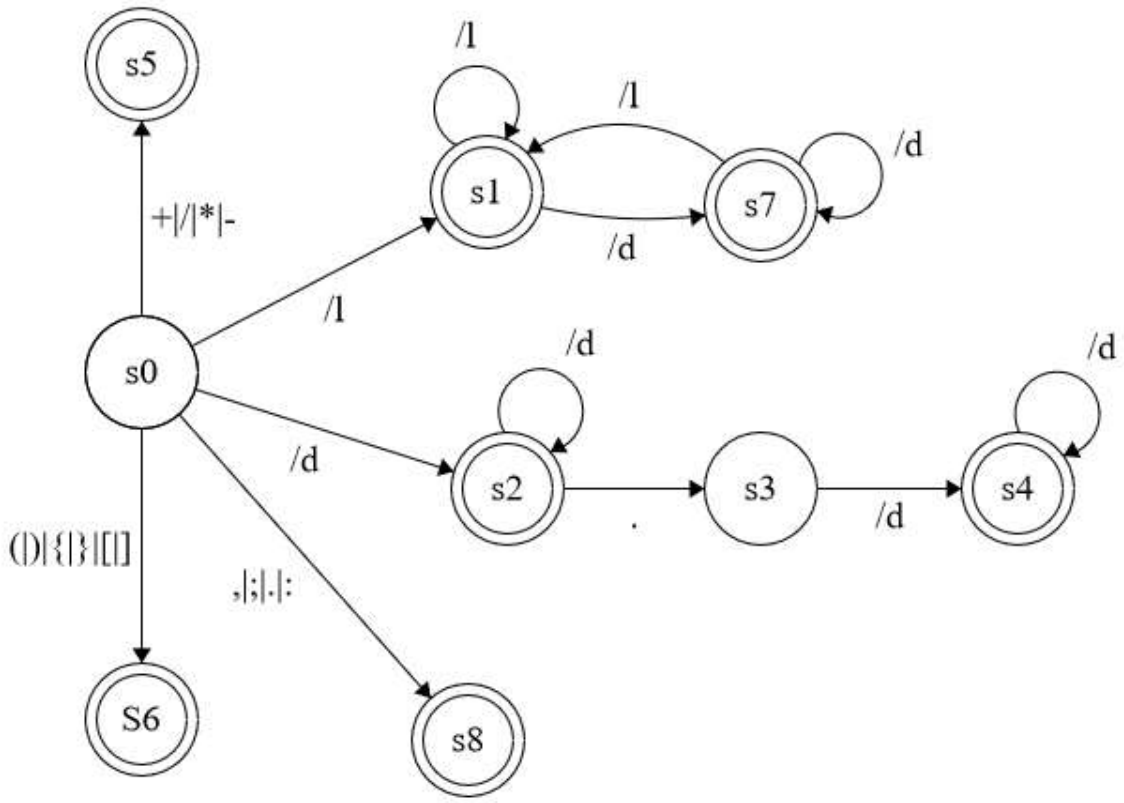
2. A={S0}

3. Σ = {/d, l, . , : , ; , , , ,*,/,-,+,%,{,},(,),[,]}

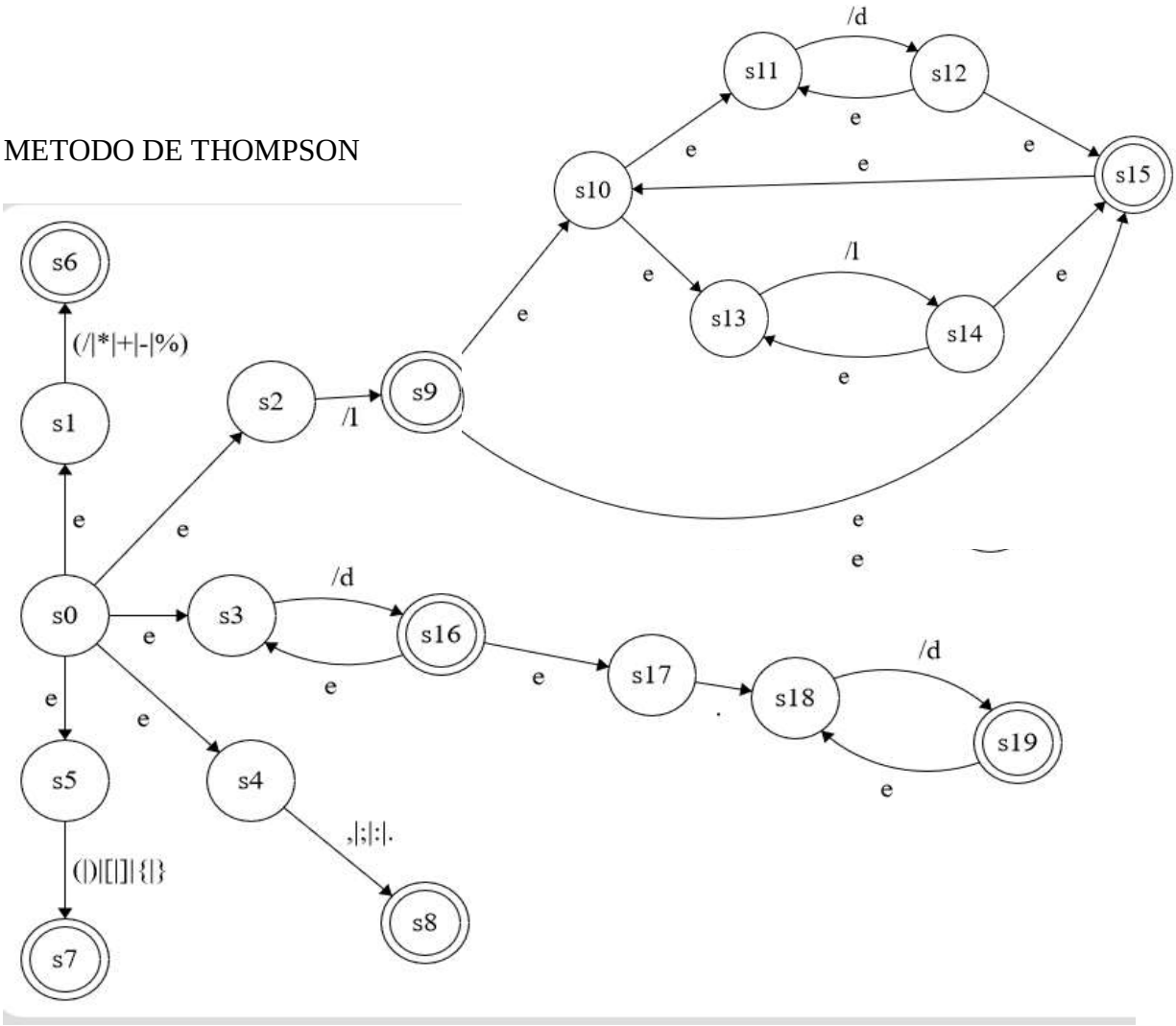
4. F = {s1,s2,s4,s5,s6,s7,s8}

5. Función de Transición

	0	1	2	3	4	5
Estado	Operador	Signo	Puntuación	/d	/l	.
S0	S5	S6	S8	S2	S1	ERROR
S1	ERROR	ERROR	ERROR	S7	S1	ERROR
S2	ERROR	ERROR	ERROR	S2	ERROR	S3
S3	ERROR	ERROR	ERROR	S4	ERROR	ERROR
S4	ERROR	ERROR	ERROR	S4	ERROR	ERROR
S7	ERROR	ERROR	ERROR	S7	S1	ERROR


s5
/l
/l
/d
s1
s7
+|/|*|-
/d
/l
s0
/d
/d
/d
s2
s3
s4
.
/d
(|)|{|}|[|]
,|;|.|:
S6
s8

METODO DE THOMPSON



FT	ϵ	/l	/d	Operador	Agrupacion	Puntuacion	.
s0	s1,s2,s3,s4,s5 = A	∂(A,/l) = B	∂(A,/d) = C	∂(A,Op) = G	∂(A,Ag) = H	∂(A,Pun) = I	∂(A,.) =I
s9	s10,s11,s13,s15 = B	∂(B,/l) = D	∂(B,/d) = E	∂(B,Op) =	∂(B,Ag) =	∂(B,Pun) =	∂(A,.) =
s16	s3,s17=C	∂(C,/l) =	∂(C,/d) = C	∂(C,Op) =	∂(C,Ag) =	∂(C,Pun) =	∂(C,.) = F
s14	s13,s15=D	∂(D,/l) = D	∂(D,/d) =	∂(D,Op) =	∂(D,Ag) =	∂(D,Pun) =	∂(D,.) =
s12	s11,s15=E	∂(E,/l) =	∂(E,/d) = E	∂(E,Op) =	∂(E,Ag) =	∂(E,Pun) =	∂(E,.) =
s18	s18=F	∂(F,/l) =	∂(F,/d) = J	∂(F,Op) =	∂(F,Ag) =	∂(F,Pun) =	∂(F,.) =
s19	s19=J	∂(J,/l) =	∂(J,/d) =	∂(J,Op) =	∂(J,Ag) =	∂(J,Pun) =	∂(J,.) =
s6	s6=G	∂(G,/l) =	∂(G,/d) =	∂(G,Op) =	∂(G,Ag) =	∂(G,Pun) =	∂(G,.) =
s7	s7=H	∂(H,/l) =	∂(H,/d) =	∂(H,Op) =	∂(H,Ag) =	∂(H,Pun) =	∂(H,.) =
s8	s8=I	∂(I,/l) =	∂(I,/d) =	∂(I,Op) =	∂(I,Ag) =	∂(I,Pun) =	∂(I,.) =

Definición formal AFD: A = (Q, Σ, ∂, A, F)

Q={A,B,C,D,E,F,G,H,I,J}

Σ = {/d, l, . , : , ; , , , ,*,/,-,+,%,{,},(,),[,]}

A ={A}

F={B,C,D,E,G,H,I,J}

Función de Transición ∂

∂(A,/l) = B	∂(A,/d) = C	∂(A,Op) = G
∂(B,/l) = D	∂(E,/d) = E	∂(C,.) = F
∂(D,/l) = D	∂(C,/d) = C	∂(A,Ag) = H
∂(E,/l) = D	∂(D,/d) = E	∂(A,Pun) = I
∂(D,/d) = E	∂(F,/d) = J	∂(A,.) =I