

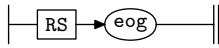
1. *lr1_sp3* grammar.

A LR1 GRAMMAR FROM DAVID SPECTOR SIGPLAN VOL 23 NO 12 DEC/88

2. Fsm Clr1_sp3 class.

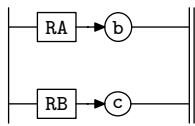
3. *Rlr1_sp3* rule.

Rlr1_sp3



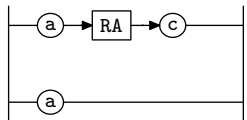
4. RS rule.

RS



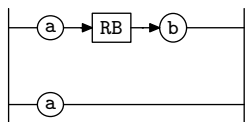
5. RA rule.

RA



6. RB rule.

RB



7. First Set Language for O_2^{linker} .

```
/*
  File: lr1_sp3.fsc
  Date and Time: Tue Sep 16 13:28:04 2014
*/
transitive      n
grammar-name    "lr1_sp3"
name-space      "NS_lr1_sp3"
thread-name     "Clr1_sp3"
monolithic      y
file-name       "lr1_sp3.fsc"
no-of-T         569
list-of-native-first-set-terminals 1
  raw_a
end-list-of-native-first-set-terminals
list-of-transitive-threads 0
end-list-of-transitive-threads
list-of-used-threads 0
end-list-of-used-threads
fsm-comments
"test out lr1 --- D Spector Vol 23 No 12 Dec/88"
```

8. Lr1 State Network.

\Rightarrow						State: 1 state type: s		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
c	RA		3	1	1	a		1 2 4
c	RA		3	2	1	a		1 2 2
c	RB		4	1	1	a		1 2 6
c	RB		4	2	1	a		1 2 2
c	Rlr1_sp3		1	1	1	RS <u>eog</u>		1 7 8
c	RS		2	1	1	RA <u>b</u>		1 9 10
c	RS		2	2	1	RB <u>c</u>		1 11 12
\Rightarrow^a							State: 2 state type: s/r^2	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	RA		3	2	2			1 0 2 1
t	RB		4	2	2			1 0 2 2
c	RA		3	1	1	a		2 13 15
c	RA		3	2	1	a		2 13 13
c	RB		4	1	1	a		2 13 17
c	RB		4	2	1	a		2 13 13
t	RA		3	1	2	RA <u>c</u>		1 3 4
t	RB		4	1	2	RB <u>b</u>		1 5 6
\Rightarrow^{RA}							State: 3 state type: s	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	RA		3	1	3	c		1 4 4
\Rightarrow^c							State: 4 state type: r	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	RA		3	1	4			1 0 4 1
\Rightarrow^{RB}							State: 5 state type: s	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	RB		4	1	3	b		1 6 6
\Rightarrow^b							State: 6 state type: r	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	RB		4	1	4			1 0 6 2
\Rightarrow^{RS}							State: 7 state type: s	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	Rlr1_sp3		1	1	2	eog		1 8 8
\Rightarrow^{eog}							State: 8 state type: r	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	Rlr1_sp3		1	1	3			1 0 8 3
\Rightarrow^{RA}							State: 9 state type: s	
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow Brn Gto Red LA
t	RS		2	1	2	b		1 10 10
\Rightarrow^b							State: 10 state type: r	

← t RS	rule	→ R# sr# Po ← 2 1 3	subrule element	→ Brn Gto Red LA 1 0 10 4
\Rightarrow^{RB}				
← t RS	rule	→ R# sr# Po ← 2 2 2 c	State: 11 state type: s subrule element	→ Brn Gto Red LA 1 12 12
\Rightarrow^c				
← t RS	rule	→ R# sr# Po ← 2 2 3	State: 12 state type: r subrule element	→ Brn Gto Red LA 1 0 12 4
\Rightarrow^a				
← t RA t RB c RA c RA c RB c RB t RA t RB	rule	→ R# sr# Po ← 3 2 2 4 2 2 3 1 1 a 3 2 1 a 4 1 1 a 4 2 1 a 3 1 2 RA <u>c</u> 4 1 2 RB <u>b</u>	State: 13 state type: s/r^2 subrule element	→ Brn Gto Red LA 2 0 13 2 2 0 13 1 13 13 15 13 13 13 13 13 17 13 13 13 2 14 15 2 16 17
\Rightarrow^{RA}				
← t RA	rule	→ R# sr# Po ← 3 1 3 c	State: 14 state type: s subrule element	→ Brn Gto Red LA 2 15 15
\Rightarrow^c				
← t RA	rule	→ R# sr# Po ← 3 1 4	State: 15 state type: r subrule element	→ Brn Gto Red LA 2 0 15 2
\Rightarrow^{RB}				
← t RB	rule	→ R# sr# Po ← 4 1 3 b	State: 16 state type: s subrule element	→ Brn Gto Red LA 2 17 17
\Rightarrow^b				
← t RB	rule	→ R# sr# Po ← 4 1 4	State: 17 state type: r subrule element	→ Brn Gto Red LA 2 0 17 1

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RB: [6](#).

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RS: [3](#).

RS: [4](#).

lr1_sp3 Grammar

Date: September 16, 2014 at 15:00

File: lr1_sp3.lex

Ns: NS_lr1_sp3

Version: 1.0

Debug: true

Grammar Comments:

Type: Monolithic

test out lr1 — D Spector Vol 23 No 12 Dec/88

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