

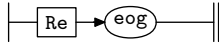
**1. Kristensen and Madsen Grammar.**

Bent Bruun Kristensen and Ole Lehrmann Madsen  
 Correspondence ACM Sigplan Notices, 19(8), August 1984.  
 Test out LALR(1) resolution.

**2. Fsm Ckm\_1 class.**

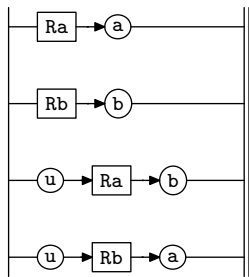
**3. *Rs* rule.**

*Rs*



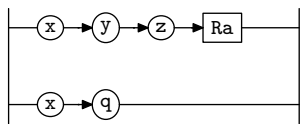
**4. *Re* rule.**

*Re*



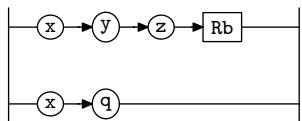
**5. *Ra* rule.**

*Ra*



**6. *Rb* rule.**

*Rb*



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

```
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  File: km_1.fsc
  Date and Time: Sun Jun 15 11:38:36 2014
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name-space      "NS_km_1"
thread-name     "Ckm_1"
monolithic      y
file-name       "km_1.fsc"
no-of-T         569
list-of-native-first-set-terminals 2
  raw_u
  raw_x
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 LALR(1) resolution."
```

## 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	Re		2	3	1	u			1 2 4
c	Re		2	4	1	u			1 2 6
c	Ra		3	1	1	x			1 7 11
c	Ra		3	2	1	x			1 7 8
c	Rb		4	1	1	x			1 7 12
c	Rb		4	2	1	x			1 7 8
c	Rs		1	1	1	Re <u>eog</u>			1 13 14
c	Re		2	1	1	Ra <u>a</u>			1 15 16
c	Re		2	2	1	Rb <u>b</u>			1 17 18
$\Rightarrow^u$							State: 2 state type: $^s$		
$\leftarrow$	rule	$\rightarrow$	R#	sr#	Po	$\leftarrow$	subrule element	$\rightarrow$	Brn Gto Red LA
c	Ra		3	1	1	x			2 19 23
c	Ra		3	2	1	x			2 19 20
c	Rb		4	1	1	x			2 19 24
c	Rb		4	2	1	x			2 19 20
t	Re		2	3	2	Ra <u>b</u>			1 3 4
t	Re		2	4	2	Rb <u>a</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	Re		2	3	3	b			1 4 4
$\Rightarrow^b$							State: 4 state type: $^r$		
$\leftarrow$	rule	$\rightarrow$	R#	sr#	Po	$\leftarrow$	subrule element	$\rightarrow$	Brn Gto Red LA
t	Re		2	3	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	Re		2	4	3	a			1 6 6
$\Rightarrow^a$							State: 6 state type: $^r$		
$\leftarrow$	rule	$\rightarrow$	R#	sr#	Po	$\leftarrow$	subrule element	$\rightarrow$	Brn Gto Red LA
t	Re		2	4	4				1 0 6 1
$\Rightarrow^x$							State: 7 state type: $^s$		
$\leftarrow$	rule	$\rightarrow$	R#	sr#	Po	$\leftarrow$	subrule element	$\rightarrow$	Brn Gto Red LA
t	Ra		3	2	2	q			1 8 8
t	Rb		4	2	2	q			1 8 8
t	Ra		3	1	2	y			1 9 11
t	Rb		4	1	2	y			1 9 12
$\Rightarrow^q$							State: 8 state type: $^{r^2}$		
$\leftarrow$	rule	$\rightarrow$	R#	sr#	Po	$\leftarrow$	subrule element	$\rightarrow$	Brn Gto Red LA
t	Ra		3	2	3				1 0 8 2
t	Rb		4	2	3				1 0 8 3
$\Rightarrow^y$							State: 9 state type: $^s$		

$\leftarrow$ t Ra t Rb	<b>rule</b>  	$\rightarrow$ R# sr# Po $\leftarrow$ 3 1 3 z 4 1 3 z	<b>subrule element</b>  	$\rightarrow$ Brn Gto Red LA 1 10 11 1 10 12
$\Rightarrow^z$				
$\leftarrow$ c Ra c Ra c Rb c Rb t Ra t Rb	<b>rule</b>  	$\rightarrow$ R# sr# Po $\leftarrow$ 3 1 1 x 3 2 1 x 4 1 1 x 4 2 1 x 3 1 4 Ra 4 1 4 Rb	<b>subrule element</b>  	$\rightarrow$ Brn Gto Red LA 10 7 11 10 7 8 10 7 12 10 7 8 1 11 11 1 12 12
$\Rightarrow^{Ra}$				
$\leftarrow$ t Ra	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 3 1 5	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 0 11 2
$\Rightarrow^{Rb}$				
$\leftarrow$ t Rb	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 4 1 5	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 0 12 3
$\Rightarrow^{Re}$				
$\leftarrow$ t Rs	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 1 1 2 eog	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 14 14
$\Rightarrow^{eog}$				
$\leftarrow$ t Rs	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 1 1 3	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 0 14 4
$\Rightarrow^{Ra}$				
$\leftarrow$ t Re	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 2 1 2 a	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 16 16
$\Rightarrow^a$				
$\leftarrow$ t Re	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 2 1 3	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 0 16 1
$\Rightarrow^{Rb}$				
$\leftarrow$ t Re	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 2 2 2 b	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 18 18
$\Rightarrow^b$				
$\leftarrow$ t Re	<b>rule</b> 	$\rightarrow$ R# sr# Po $\leftarrow$ 2 2 3	<b>subrule element</b> 	$\rightarrow$ Brn Gto Red LA 1 0 18 1
$\Rightarrow^x$				
$\leftarrow$ t Ra t Rb t Ra t Rb	<b>rule</b>  	$\rightarrow$ R# sr# Po $\leftarrow$ 3 2 2 q 4 2 2 q 3 1 2 y 4 1 2 y	<b>subrule element</b>  	$\rightarrow$ Brn Gto Red LA 2 20 20 2 20 20 2 21 23 2 21 24

$\Rightarrow^q$						State: 20 state type: $r^2$			
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn Gto Red LA
t Ra			3	2	3				2 0 20 3
t Rb			4	2	3				2 0 20 2
$\Rightarrow^y$						State: 21 state type: $s$			
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn Gto Red LA
t Ra			3	1	3	z			2 22 23
t Rb			4	1	3	z			2 22 24
$\Rightarrow^z$						State: 22 state type: $s$			
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn Gto Red LA
c Ra			3	1	1	x			22 19 23
c Ra			3	2	1	x			22 19 20
c Rb			4	1	1	x			22 19 24
c Rb			4	2	1	x			22 19 20
t Ra			3	1	4	Ra			2 23 23
t Rb			4	1	4	Rb			2 24 24
$\Rightarrow^{Ra}$						State: 23 state type: $r$			
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn Gto Red LA
t Ra			3	1	5				2 0 23 3
$\Rightarrow^{Rb}$						State: 24 state type: $r$			
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn Gto Red LA
t Rb			4	1	5				2 0 24 2

**9. Index.**

eog: 3.

Ra: 4, 5.

*Ra*: 5.

Rb: 4, 6.

*Rb*: 6.

Re: 3.

*Re*: 4.

*Rs*: 3.

km\_1 Grammar

Date: June 15, 2014 at 15:01

File: km\_1.lex

Ns: NS\_km\_1

Version: 1.0

Debug: false

Grammar Comments:

Type: Monolithic

Test out LALR(1) resolution.

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<i>Re</i> rule .....	<a href="#">4</a>	1
<i>Ra</i> rule .....	<a href="#">5</a>	1
<i>Rb</i> rule .....	<a href="#">6</a>	1
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