

1. David Pager Grammar.

David Pager

The Lane Table Method Of Constructing LR(1) Parsers.

2. Fsm Cpager_1 class.

3. Cpager_1 failed directive.

The RSVP_FSM macro is used to pass back an error to the calling grammar in its “Accept queue”! Here the error is within the monolithic grammar so place it directly into the “Error queue”. Please read “wlibrary.pdf” or “o2book.pdf” on the differences between:

RSVP and RSVP_FSM and their contextes to place a T into the “Accept queue” whereas ADD_TOKEN_TO_ERROR_QUEUE and ADD_TOKEN_TO_ERROR_QUEUE_FSM macros store the T into the “Error queue”.

Note: Reference to *current_token* to fetch its token stream gps.

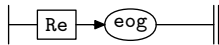
```

<Cpager_1 failed directive 3> ≡
  CAbs_lr1_sym * sym = new Err_bad_T_inputted;
  sym->set_rc(*parser->current_token--, __FILE__, __LINE__);
  ADD_TOKEN_TO_ERROR_QUEUE_FSM(*sym);
  return true;

```

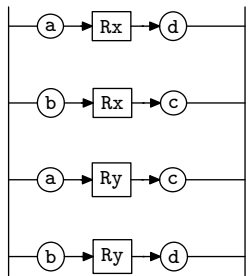
4. Rs rule.

Rs



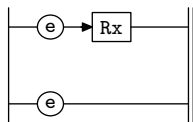
5. Re rule.

Re



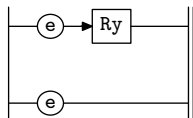
6. Rx rule.

Rx



7. Ry rule.

Ry



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

```
/*
  File: pager_1.fsc
  Date and Time: Fri Jan  2 09:49:30 2015
*/
transitive      n
grammar-name    "pager_1"
name-space      "NS_pager_1"
thread-name     "Cpager_1"
monolithic      y
file-name       "pager_1.fsc"
no-of-T         269
list-of-native-first-set-terminals 2
  raw_a
  raw_b
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 David Pager LR(1) resolution page 61."
```

9. 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 | 1 | 1 | a | | 1 2 4 |
| c | Re | | 2 | 3 | 1 | a | | 1 2 6 |
| c | Re | | 2 | 4 | 1 | b | | 1 7 11 |
| c | Re | | 2 | 2 | 1 | b | | 1 7 9 |
| c | Rs | | 1 | 1 | 1 | Re <u>eog</u> | | 1 12 13 |
| \Rightarrow^a | | | | | | | State: 2 state type: ^s | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| c | Rx | | 3 | 1 | 1 | e | | 2 14 15 |
| c | Rx | | 3 | 2 | 1 | e | | 2 14 14 |
| c | Ry | | 4 | 2 | 1 | e | | 2 14 14 |
| c | Ry | | 4 | 1 | 1 | e | | 2 14 16 |
| t | Re | | 2 | 1 | 2 | Rx <u>d</u> | | 1 3 4 |
| t | Re | | 2 | 3 | 2 | Ry <u>c</u> | | 1 5 6 |
| \Rightarrow^{Rx} | | | | | | | State: 3 state type: ^s | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| t | Re | | 2 | 1 | 3 | d | | 1 4 4 |
| \Rightarrow^d | | | | | | | State: 4 state type: ^r | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| t | Re | | 2 | 1 | 4 | | | 1 0 4 1 |
| \Rightarrow^{Ry} | | | | | | | State: 5 state type: ^s | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| t | Re | | 2 | 3 | 3 | c | | 1 6 6 |
| \Rightarrow^c | | | | | | | State: 6 state type: ^r | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| t | Re | | 2 | 3 | 4 | | | 1 0 6 1 |
| \Rightarrow^b | | | | | | | State: 7 state type: ^s | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| c | Rx | | 3 | 1 | 1 | e | | 7 17 18 |
| c | Rx | | 3 | 2 | 1 | e | | 7 17 17 |
| c | Ry | | 4 | 2 | 1 | e | | 7 17 17 |
| c | Ry | | 4 | 1 | 1 | e | | 7 17 19 |
| t | Re | | 2 | 2 | 2 | Rx <u>c</u> | | 1 8 9 |
| t | Re | | 2 | 4 | 2 | Ry <u>d</u> | | 1 10 11 |
| \Rightarrow^{Rx} | | | | | | | State: 8 state type: ^s | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| t | Re | | 2 | 2 | 3 | c | | 1 9 9 |
| \Rightarrow^c | | | | | | | State: 9 state type: ^r | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow Brn Gto Red LA |
| t | Re | | 2 | 2 | 4 | | | 1 0 9 1 |

| | | | | | | | | | |
|-------------------|------|---------------|----|-----|----|--------------|-------------------------------|---------------|----------------|
| $\Rightarrow R_y$ | | | | | | | State: 10 state type: s | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Re | | | 2 | 4 | 3 | d | | | 1 11 11 |
| $\Rightarrow d$ | | | | | | | State: 11 state type: r | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Re | | | 2 | 4 | 4 | | | | 1 0 11 1 |
| $\Rightarrow Re$ | | | | | | | State: 12 state type: s | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Rs | | | 1 | 1 | 2 | eog | | | 1 13 13 |
| $\Rightarrow eog$ | | | | | | | State: 13 state type: r | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Rs | | | 1 | 1 | 3 | | | | 1 0 13 2 |
| $\Rightarrow e$ | | | | | | | State: 14 state type: s/r^2 | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Rx | | | 3 | 2 | 2 | | | | 2 0 14 3 |
| t Ry | | | 4 | 2 | 2 | | | | 2 0 14 4 |
| c Rx | | | 3 | 1 | 1 | e | | | 14 14 15 |
| c Rx | | | 3 | 2 | 1 | e | | | 14 14 14 |
| c Ry | | | 4 | 2 | 1 | e | | | 14 14 14 |
| c Ry | | | 4 | 1 | 1 | e | | | 14 14 16 |
| t Rx | | | 3 | 1 | 2 | Rx | | | 2 15 15 |
| t Ry | | | 4 | 1 | 2 | Ry | | | 2 16 16 |
| $\Rightarrow Rx$ | | | | | | | State: 15 state type: r | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Rx | | | 3 | 1 | 3 | | | | 2 0 15 3 |
| $\Rightarrow Ry$ | | | | | | | State: 16 state type: r | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Ry | | | 4 | 1 | 3 | | | | 2 0 16 4 |
| $\Rightarrow e$ | | | | | | | State: 17 state type: s/r^2 | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Rx | | | 3 | 2 | 2 | | | | 7 0 17 4 |
| t Ry | | | 4 | 2 | 2 | | | | 7 0 17 3 |
| c Rx | | | 3 | 1 | 1 | e | | | 17 17 18 |
| c Rx | | | 3 | 2 | 1 | e | | | 17 17 17 |
| c Ry | | | 4 | 2 | 1 | e | | | 17 17 17 |
| c Ry | | | 4 | 1 | 1 | e | | | 17 17 19 |
| t Rx | | | 3 | 1 | 2 | Rx | | | 7 18 18 |
| t Ry | | | 4 | 1 | 2 | Ry | | | 7 19 19 |
| $\Rightarrow Rx$ | | | | | | | State: 18 state type: r | | |
| \leftarrow | rule | \rightarrow | R# | sr# | Po | \leftarrow | subrule element | \rightarrow | Brn Gto Red LA |
| t Rx | | | 3 | 1 | 3 | | | | 7 0 18 4 |
| $\Rightarrow Ry$ | | | | | | | State: 19 state type: r | | |

← rule → R# sr# Po ←
t Ry 4 1 3

subrule element

→ Brn Gto Red LA
7 0 19 3

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sym: 3.

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<Cpager_1 failed directive 3>

pager_1 Grammar

Date: January 2, 2015 at 11:27

File: pager_1.lex

Ns: NS_pager_1

Version: 1.0

Debug: true

Grammar Comments:

Type: Monolithic

Test out David Pager LR(1) resolution page 61.

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