

CoCoA-5 - Bug #344

basic_string::erase error in interpreter

24 Apr 2013 15:15 - John Abbott

Status:	Closed	Start date:	24 Apr 2013
Priority:	High	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	Parser/Interpreter	Estimated time:	0.00 hour
Target version:	CoCoA-5.0.3	Spent time:	3.20 hours
Description			
Save the following in a file, and then use send-region (without final newline) to send it to CoCoA:			
<pre>OrderMatrix := Mat([[1,0,0], [0,1,0], [,0,1]]);</pre>			
This produces a basic_string::erase error!!			
Related issues:			
Related to CoCoA-5 - Feature #8: source region		Closed	20 Oct 2011

History

#1 - 24 Apr 2013 15:16 - John Abbott

Found by Giulia Marconi.

#2 - 24 Apr 2013 18:00 - John Abbott

- Assignee set to John Abbott

The same error occurs even when the input is syntactically correct (but without final newline):

```
OrderMatrix := Mat([[1,0],
                    [0,1]]);
```

Adding a final space did not eliminate the error.

The error **does not arise** if the input resides on a single line [without TAB char]

The error **does not arise** if the second line does not contain a TAB char.

The error **does arise** with a single line containing a TAB char!

#3 - 26 Apr 2013 11:22 - John Abbott

I'm 99% certain I know what the problem is: when emacs generates the `SourceRegion` command it uses column position as a character count, but this is **not valid** if there are TAB characters in the line!!

I note that `CoCoAInterpreter` does not make a mistake when indicating the position of an error in a line because it prints out a TAB as just a single space. Presumably the Emacs code must compute the difference between the values of `(point)` at the start of the line and at the region end in the line.

#4 - 27 Apr 2013 22:25 - John Abbott

- *Status changed from New to Resolved*

- *% Done changed from 0 to 80*

I believe I have found and resolved the problem. Make the following change:

```
(defun cocoa5-column-number-at-pos (pos)
  (save-excursion
    (progn
      (goto-char pos)
      (setq end-pt (point))
      (forward-line 0) ;; move to beginning of line
      (setq start-pt (point))
      (- end-pt start-pt))))
```

Hmm, maybe I should change the fn name.

Done new name is `cocoa5-char-index-in-line`

The trouble was indeed that column count is not the same as character count.

I should probably also add a better error check in the `SourceRegion` command.

Done error message is a bit cryptic (but I doubt it matters because no one should ever type in the command by hand).

#5 - 07 May 2013 23:33 - John Abbott

An error is reported if the region selected starts after the last character on a line (e.g. starting at an empty line). The problem is that Emacs indicates a column position "one after the last char" (presumably the position of the newline).

Update: fixed, change line 110 in `LineProviders.C` (will check in tmrw)

#6 - 20 May 2013 11:25 - John Abbott

- *Status changed from Resolved to Feedback*

- *% Done changed from 80 to 90*

No further problems have come to light in the last 2 weeks, so I'm changing the state to feedback (hoping to close the issue before the COCOA school).

#7 - 24 May 2013 18:55 - John Abbott

- *Status changed from Feedback to Closed*

- *% Done changed from 90 to 100*

No further problems found in 3 weeks, so closing this issue.