

CoCoALib - Design #1391

RingElems: syntax with [and] ?

10 Jan 2020 17:07 - John Abbott

Status:	Closed	Start date:	10 Jan 2020
Priority:	Normal	Due date:	
Assignee:	Anna Maria Bigatti	% Done:	100%
Category:	Improving	Estimated time:	5.77 hours
Target version:	CoCoALib-0.99800	Spent time:	5.80 hours
Description I was a little surprised that RingElems(P, "[x,y]") produced a run-time error. Would it make sense to allow an initial "[" and a final "]"? Not sure... 2020-02: new function RingElemList			
Related issues:			
Related to CoCoALib - Feature #1332: New function: vector of RingElem from st...		Closed	08 Oct 2019
Related to CoCoA-5 - Feature #1243: New function: Read a string into a list (...)		Closed	13 Feb 2019
Related to CoCoA-5 - Feature #1509: RingElems with empty input		Closed	14 Oct 2020

History

#1 - 10 Jan 2020 17:07 - John Abbott

- Related to Feature #1332: New function: vector of RingElem from string -- in CoCoALib added

#2 - 13 Jan 2020 11:24 - Anna Maria Bigatti

- % Done changed from 0 to 10

It is compatible with NewPolyRing(QQ, "x,y,z").

I prefer not to add the brackets because then we have to make the code more complicated, but I see your point....

On the other hand I see the RingElems() like square brackets.

#3 - 13 Jan 2020 12:11 - John Abbott

- Status changed from New to In Progress

Could it make sense to have a "variant" fn which accepts [and]?
Maybe RingElemVec or RingElemList?

#4 - 13 Jan 2020 16:00 - Anna Maria Bigatti

- % Done changed from 10 to 40

We could have a RingElemList in CoCoA-5.
I have defined a function in NotBuiltin.cpkg5. About to check it in.

```
/**/ P ::= QQ[a,b,c];  
/**/ RingElemList(P, "[a*b]");  
[a*b]
```

It is not documented (yet). Let's try it first.
BTW, RingElems is not documented either. **2020-10-14: now it is documented!**

In fact, this make sense in CoCoA-5, and not really in CoCoALib, where the C++14 syntax for a vector is with curly brackets.

#5 - 13 Jan 2020 16:32 - Anna Maria Bigatti

- *Related to Feature #1243: New function: Read a string into a list (of RingElem) -- CoCoA-5 added*

#6 - 25 Jan 2020 15:20 - John Abbott

The issue about allowing [...] or not is similar (in my mind) to the issue about a semicolon at the end **ReadExprSemicolon**.

Qn: why do we have **RingElem** and **ReadExprSemicolon** -- as I wrote in [#1052](#) comment 10, I do not much like the name ReadExprSemicolon because it seems wrong to me that the terminating char/string appears in the name of the fn.

See also issues [#209](#) and [#1052](#).

#7 - 12 Feb 2020 18:08 - John Abbott

- *Target version changed from CoCoALib-0.99700 to CoCoALib-0.99800*

#8 - 14 Feb 2020 14:01 - Anna Maria Bigatti

- *Subject changed from RingElems: [and] not allowed to RingElems: syntax with [and] ?*

- *Description updated*

- *Status changed from In Progress to Resolved*

- *Assignee set to Anna Maria Bigatti*

- *% Done changed from 40 to 80*

Made it more robust with empty list.

#9 - 05 Oct 2020 13:03 - John Abbott

I would like to see a minor improvement: allow whitespace before the initial [and after the final].
It will complicate the code slightly.

Here are some test cases:

```
RingElemList(R, "[ ]");  
RingElemList(R, " [ ] ");  
RingElemList(R, "[x,y,z]");  
RingElemList(R, " [ x , y , z ] ");
```

There should also be some tests using TAB character instead of space.

#10 - 06 Oct 2020 11:35 - John Abbott

I have changed **RingElemList** (in NotBuiltin.cpkg5).
I have added a new test test-RingElems.cocoa5 with the tests mentioned in comment 9.

#11 - 14 Oct 2020 11:53 - John Abbott

- *Related to Feature #1509: RingElems with empty input added*

#12 - 14 Oct 2020 11:54 - John Abbott

Should **RingElemList** be ported into CoCoALib? (perhaps with a different name?)
If so, what should it be called?

PS this issue is in "CoCoALib" rather than "CoCoA-5"

#13 - 14 Oct 2020 14:22 - John Abbott

Note that we have CoeffVecWRT and CoeffListWRT. So it would be reasonable to call the CoCoALib fn **RingElemVec**.

#14 - 03 Nov 2020 20:51 - John Abbott

- *Status changed from Resolved to Feedback*
- *% Done changed from 80 to 90*

I have implemented **RingElemVec**; the code is mostly shared with RingElems.

#15 - 13 Nov 2020 14:36 - John Abbott

Remove the CoCoA-5 and make it call the cocoalib version.

#16 - 13 Nov 2020 18:29 - John Abbott

The C++ version does not work: WhatsNext causes too much trouble :-(

Groan...

#17 - 26 Nov 2020 16:29 - John Abbott

My copy works ok, but I must devise tests.

#18 - 08 Jan 2021 13:03 - John Abbott

- *Status changed from Feedback to Closed*
- *% Done changed from 90 to 100*
- *Estimated time set to 5.77 h*

I have added some tests (to test-RingElem5.C).
All seems OK. Closing.