

## CoCoALib - Feature #1332

### New function: vector of RingElem from string -- in CoCoALib

08 Oct 2019 15:49 - Anna Maria Bigatti

<b>Status:</b>	Closed	<b>Start date:</b>	08 Oct 2019
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Anna Maria Bigatti	<b>% Done:</b>	100%
<b>Category:</b>	New Function	<b>Estimated time:</b>	3.51 hours
<b>Target version:</b>	CoCoALib-0.99650 November 2019	<b>Spent time:</b>	3.40 hours
<b>Description</b>			
In many cases in CoCoALib, and often also in CoCoA-5, it would be convenient to make a vector of RingElem from a string, that is, an extension of RingElem(R, str) to a vector. Think, design, an implement.			
2019-10 implemented as RingElems(ring, string)			
<b>Related issues:</b>			
Related to CoCoALib - Feature #1330: New syntax for NewQuotientRing		<b>Closed</b>	<b>08 Oct 2019</b>
Related to CoCoALib - Feature #1329: New syntax for creating homomorphisms (P...		<b>Closed</b>	<b>08 Oct 2019</b>
Related to CoCoALib - Feature #357: Constructor for vectors? CoCoAVector		<b>Rejected</b>	<b>24 May 2013</b>
Related to CoCoA-5 - Feature #1243: New function: Read a string into a list (...)		<b>Closed</b>	<b>13 Feb 2019</b>
Related to CoCoALib - Design #1391: RingElems: syntax with [ and ] ?		<b>Closed</b>	<b>10 Jan 2020</b>
Related to CoCoALib - Design #1414: Make class RingElemVector?		<b>In Progress</b>	<b>12 Feb 2020</b>

#### History

##### #1 - 08 Oct 2019 15:50 - Anna Maria Bigatti

- Related to Feature #1330: New syntax for NewQuotientRing added

##### #2 - 08 Oct 2019 15:50 - Anna Maria Bigatti

- Related to Feature #1329: New syntax for creating homomorphisms (PolyAlgebraHom) added

##### #3 - 08 Oct 2019 15:51 - Anna Maria Bigatti

- Related to Feature #357: Constructor for vectors? CoCoAVector added

##### #4 - 08 Oct 2019 15:55 - Anna Maria Bigatti

- Category set to New Function

- Target version set to CoCoALib-0.99700

- % Done changed from 0 to 10

maybe CoCoAVector(R, string)?

e.g.

```
CoCoAVector(NewPolyRing(QQ,"x,y,z"), "x^2-3, y^3-1234567");
```

##### #5 - 09 Oct 2019 15:55 - John Abbott

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

##### #6 - 09 Oct 2019 17:53 - Anna Maria Bigatti

- Subject changed from New function: vector of RingElem from string to New function: vector of RingElem from string -- in CoCoALib

Done:

I think I've done it. ... after lots of tedious little mistakes!

Called ReadExprVector(ring, string) in RingElemInput.[CH]

Now testing and applying where useful for CoCoA-5, then we can re-think of the function name within CoCoALib.

time added in [#1243](#) by mistake

**#7 - 10 Oct 2019 09:33 - Anna Maria Bigatti**

- Status changed from New to Resolved

- Assignee set to Anna Maria Bigatti

- % Done changed from 10 to 80

**#8 - 10 Oct 2019 09:34 - Anna Maria Bigatti**

- Target version changed from CoCoALib-0.99700 to CoCoALib-0.99650 November 2019

**#9 - 10 Oct 2019 09:56 - Anna Maria Bigatti**

reminder: write doc for cocoalib

**#10 - 10 Oct 2019 09:57 - Anna Maria Bigatti**

reminder: write doc for cocoalib

**#11 - 15 Oct 2019 15:33 - Anna Maria Bigatti**

I like the name **RingElems(R, str)** because it recalls the constructor RingElem(R, str).

The name I suggested before, CoCoAVector, is not good because it is used for a template with any type (VectorOps.H).

**#12 - 17 Oct 2019 17:45 - John Abbott**

OK for the name **RingElems** it is a bit like **symbols**

(I do not really like it that much, but cannot think of a better one)

**#13 - 18 Oct 2019 16:16 - Anna Maria Bigatti**

- Description updated

- Status changed from Resolved to Feedback

- % Done changed from 80 to 90

done, documented, tested

**#14 - 29 Oct 2019 16:21 - Anna Maria Bigatti**

- Status changed from Feedback to Closed

- % Done changed from 90 to 100

- Estimated time set to 3.51 h

documented in RingElem.txt

**#15 - 10 Jan 2020 17:07 - John Abbott**

- Related to Design #1391: RingElems: syntax with [ and ] ? added

#16 - 12 Feb 2020 14:49 - Anna Maria Bigatti

- Related to Design #1414: Make class RingElemVector? added