# CoCoALib - Feature #1332

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

08 Oct 2019 15:49 - Anna Maria Bigatti

| | | | |
|---|---|---|---|
| **Status:** | Closed | **Start date:** | 08 Oct 2019 |
| **Priority:** | Normal | **Due date:** | |
| **Assignee:** | Anna Maria Bigatti | **% Done:** | 100% |
| **Category:** | New Function | **Estimated time:** | 3.51 hours |
| **Target version:** | CoCoALib-0.99650 November 2019 | **Spent time:** | 3.40 hours |

### Description

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)

### Related issues:

| | | |
|---|---|---|
| Related to CoCoALib - Feature #1330: New syntax for NewQuotientRing | **Closed** | **08 Oct 2019** |
| Related to CoCoALib - Feature #1329: New syntax for creating homomorphisms (P... | **Closed** | **08 Oct 2019** |
| Related to CoCoALib - Feature #357: Constructor for vectors? CoCoAVector | **Rejected** | **24 May 2013** |
| Related to CoCoA-5 - Feature #1243: New function: Read a string into a list (... | **Closed** | **13 Feb 2019** |
| Related to CoCoALib - Design #1391: RingElems: syntax with [ and ] ? | **Closed** | **10 Jan 2020** |
| Related to CoCoALib - Design #1414: Make class RingElemVector? | **In Progress** | **12 Feb 2020** |

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### 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*