CoCoALib - Feature #1329

New syntax for creating homomorphisms (PolyAlgebraHom)

08 Oct 2019 12:16 - Anna Maria Bigatti

Status:	Closed		**Start date:**	08 Oct 2019
Priority:	Normal		**Due date:**	
Assignee:	Anna Maria Bigatti		**% Done:**	100%
Category:	Improving		**Estimated time:**	0.00 hour
Target version:	CoCoALib-0.99650 November 2019		**Spent time:**	1.20 hour

Description

Making a homomorphism is often tedious. In CoCoA-5 we need to write (the best we can do):

```
QQy ::= QQ[y];
R := NewQuotientRing(QQy, ideal(RingElem(QQy,"y^2-5")));
phi := PolyAlgebraHom(QQt(1), R, [RingElem(R,"(1+y)/2")]);
```

Consider the syntax:

```
phi := PolyAlgebraHom(QQt(1), R, "(1+y)/2");
```

where the string is automatically read in the codomain.
(similar for NewQuotientRing)

2019-10 Done. Example:

```
phi := PolyAlgebraHom(R, S, "a,1,0");
```

Related issues:

Related to CoCoA-5 - Design #1327: Inconvenient PolyRingHom, PolyAlgebraHom	**Closed**	**07 Oct 2019**
Related to CoCoALib - Feature #1332: New function: vector of RingElem from st...	**Closed**	**08 Oct 2019**
Related to CoCoALib - Feature #1532: Convenient RingHom pseudo-ctors	**In Progress**	**06 Nov 2020**
Related to CoCoALib - Bug #1484: ker bug (quotientinghom for R/ideal())	**Closed**	**14 Sep 2020**

History

#1 - 08 Oct 2019 12:21 - Anna Maria Bigatti

- Related to Design #1327: Inconvenient PolyRingHom, PolyAlgebraHom added

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

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

#3 - 09 Oct 2019 17:49 - Anna Maria Bigatti

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

#4 - 09 Oct 2019 17:51 - Anna Maria Bigatti

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

#5 - 10 Oct 2019 09:49 - Anna Maria Bigatti

- Subject changed from New sytax for creating homomorphisms to New syntax for creating homomorphisms

- Description updated

- Status changed from In Progress to Resolved

- Assignee set to Anna Maria Bigatti

- % Done changed from 10 to 80

#6 - 10 Oct 2019 18:41 - Anna Maria Bigatti

- Status changed from Resolved to Feedback

- % Done changed from 80 to 90

#7 - 10 Oct 2019 18:50 - Anna Maria Bigatti

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

#8 - 15 Oct 2019 17:48 - Anna Maria Bigatti

- Description updated

- Status changed from Feedback to Closed

- % Done changed from 90 to 100

#9 - 09 Nov 2020 10:03 - Anna Maria Bigatti

- Subject changed from New syntax for creating homomorphisms to New syntax for creating homomorphisms (PolyAlgebraHom)

#10 - 09 Nov 2020 10:03 - Anna Maria Bigatti

- Related to Feature #1532: Convenient RingHom pseudo-ctors added

#11 - 29 Jan 2021 15:07 - Anna Maria Bigatti

- Related to Bug #1484: ker bug (quotientinghom for R/ideal()) added