CoCoALib - Bug #178

IsHomog: should it throw an error when there is no grading?

07 Jun 2012 17:17 - Anna Maria Bigatti

Status:	Closed		**Start date:**	07 Jun 2012
Priority:	Normal		**Due date:**	
Assignee:	Anna Maria Bigatti		**% Done:**	90%
Category:	Safety		**Estimated time:**	0.00 hour
Target version:	CoCoALib-0.9953		**Spent time:**	1.60 hour

Description

Here is a piece of code from CoCoA-5

```
/**/ Use QQ[x,y], Lex;
/**/ IsHomog(x-1);
true
```

It is correct because **GradingDim = 0**, but a naive user might think in terms of standard grading.
An expert user instead should not even ask that question (like **gcd** in a field)

I think it should **throw an error**. Comments?

12 feb 2013: now throws an error

Related issues:

Related to CoCoA-5 - Bug #162: RegularityIndex <= 0	**Closed**	**17 May 2012**
Related to CoCoA-5 - Support #181: Functions throwing error even though (triv...	**New**	**08 Jun 2012**

History

#1 - 07 Jun 2012 22:57 - John Abbott

Yes, I think throwing an error is best(=safest) in this case. Same applies to any other "homog" function.
2013-02-11 Also JAA cannot think of any plausible situation when it is genuinely useful to have a grading over ZZ^0.

JAA wonders whether we should make a catalogue of cases where we choose to throw an error even though there is a well-defined mathematical result. If we should make one, what form should it have?

#2 - 08 Jun 2012 08:46 - Anna Maria Bigatti

- Subject changed from IsHomog: should it trhow an error when there is no grading? to IsHomog: should it throw an error when there is no grading?

#3 - 12 Feb 2013 17:39 - Anna Maria Bigatti

- Status changed from New to Feedback

- Assignee set to Anna Maria Bigatti

- Target version set to CoCoALib-0.9953

#4 - 12 Feb 2013 17:41 - Anna Maria Bigatti

- % Done changed from 0 to 90

#5 - 15 Feb 2013 19:24 - John Abbott

ex-PolyRing1 with debugging active fails:

```
***ERROR***  UNCAUGHT CoCoA error
```

```
**************************************************************************
****CoCoA ERROR****   ErrCode: CoCoA::ERR::ZeroGradingDim
****CoCoA ERROR****   Message: GradingDim (grading dimension) is 0
****CoCoA ERROR****   Context: IsHomog(RingElem)
****CoCoA ERROR****   File:    SparsePolyRing.C
****CoCoA ERROR****   Line:    936
**************************************************************************
```

#6 - 29 Oct 2013 14:25 - Anna Maria Bigatti

- Status changed from Feedback to Closed

```
****CoCoA ERROR****   ErrCode: CoCoA::ERR::ZeroGradingDim
****CoCoA ERROR****   Message: GradingDim (grading dimension) is 0
****CoCoA ERROR****   Context: IsHomog(RingElem)
****CoCoA ERROR****   File:    SparsePolyRing.C
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