

CoCoALib - Design #1279

Tidy up code for matrix determinant

03 May 2019 11:47 - John Abbott

Status:	Closed	Start date:	03 May 2019
Priority:	Normal	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	Tidying	Estimated time:	2.66 hours
Target version:	CoCoALib-0.99800	Spent time:	2.60 hours
Description			
I recently encountered an unexpected error while trying to compute the determinant of a 2x2 matrix over $\mathbb{Z}/(841)$ where $841 = 29^2$.			
There seem to be several "suboptimal" aspects in the code:			
<ul style="list-style-type: none">• DetDirect has an incorrect assertion that the ring is a PolyRing• DetDirect probably should not have been called anyway• why wasn't det2x2 called?			
Review the code, and tidy it up!			
Related issues:			
Related to CoCoALib - Bug #1280: Determinant & Inverse of matrix over non int...		In Progress	03 May 2019

History

#1 - 03 May 2019 13:58 - John Abbott

- Related to Bug #1280: Determinant & Inverse of matrix over non integral domain added

#2 - 09 Jan 2020 12:22 - John Abbott

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

#3 - 06 Oct 2020 15:20 - John Abbott

- Status changed from New to Resolved

- Assignee set to John Abbott

- % Done changed from 0 to 70

Main dispatch fn is `ConstMatrixViewBase::myDet` around `matrix.C:221`

The code has already been considerably cleaned up, but still performs poorly for some inputs.

#4 - 29 Oct 2020 21:48 - John Abbott

- Description updated

- Status changed from Resolved to Closed

- % Done changed from 70 to 100

- Estimated time set to 2.66 h

The current version is acceptable; it could be made better, but there are plenty of other more important issues (at the moment).

Closing.