

CoCoALib - Bug #1331

adj: for matrices 7x7 and bigger

08 Oct 2019 15:24 - John Abbott

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|---|------------------|------------------------|--------------------|
| Status: | Closed | Start date: | 08 Oct 2019 |
| Priority: | Normal | Due date: | |
| Assignee: | John Abbott | % Done: | 100% |
| Category: | Maths Bugs | Estimated time: | 1.17 hour |
| Target version: | CoCoALib-0.99800 | Spent time: | 1.15 hour |
| Description | | | |
| adj (previously adjoint) gives a misleading and unnecessary error mesg if given a square matrix of dimension at least 7 over ZZ/(n) where n is not prime. | | | |
| It should not give error because the adjoint exists, and can be computed. | | | |
| Related issues: | | | |
| Related to CoCoALib - Bug #15: Adjoint of a non-invertible matrix | | Closed | 28 Oct 2011 |

History

#1 - 08 Oct 2019 15:26 - John Abbott

- Status changed from New to In Progress
- % Done changed from 0 to 10

Here is a simple failing case:

```
ZZ25 ::= ZZ/(25);
adj(IdentityMat(ZZ25,6)); --> this works
adj(IdentityMat(ZZ25,7)); --> error ring is not SparsePolyRing!
```

#2 - 08 Oct 2019 15:26 - John Abbott

- Related to Bug #15: Adjoint of a non-invertible matrix added

#3 - 25 Sep 2020 14:35 - John Abbott

- Status changed from In Progress to Resolved
- % Done changed from 10 to 80

There were two problems:

- (A) the dispatch function ConstMatrixViewBase::myDet in matrix.C was rather crude
- (B) the impl of DetDirect required needlessly that the ring be a polyring (now fixed).

I have tried to improve myDet().

#4 - 25 Sep 2020 14:52 - John Abbott

- Assignee set to John Abbott

Now I have split DetDirect into two fns: one generic and one for sparsepolyrings (where I can use geobuckets)

#5 - 25 Sep 2020 14:58 - John Abbott

I have added a test to test-bug1.C

#6 - 28 Oct 2020 23:17 - John Abbott

- *Status changed from Resolved to Closed*

- *% Done changed from 80 to 100*

- *Estimated time set to 1.17 h*