

CoCoALib - Feature #1436

Flatten for a matrix

04 Mar 2020 20:59 - John Abbott

Status:	Closed	Start date:	04 Mar 2020
Priority:	Low	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	New Function	Estimated time:	1.41 hour
Target version:	CoCoALib-0.99800	Spent time:	1.40 hour
Description			
I happened to see in SparsePolyOps-MinPoly.C that there is a function for "flattening" a matrix.			
Do we want to make official functions for flattening?			
Suggested names: FlattenMatByRows and FlattenMatByCols			
Return type: vector<RingElem>			
Note that we already have MatByRows and MatByCols which are the opposite functions.			

History

#1 - 25 Sep 2020 11:13 - John Abbott

- Priority changed from Normal to Low

- Target version changed from CoCoALib-0.99800 to CoCoALib-0.99850

Some notes:

- **(A)** there are already the functions GetRows and GetCols which return a vector<vector<RingElem>>
- **(B)** the current fn is MatrixFlatten around lines 116-125 in SparsePolyOps-MinPoly.C

In its current "private" form MatrixFlatten is a "nasty" impl: it requires that the vector into which the result is copied be of the right size. We could either use resize inside the function, or else write a function which creates a new vector and returns that (returning should not copy the vector).

I think this is not urgent, so am postponing to 0.99750.

#2 - 25 Sep 2020 17:06 - Anna Maria Bigatti

it is only used in **RingElem MinPoly(ConstMatrixView M, ConstRefRingElem x)**.

#3 - 02 Oct 2020 17:03 - John Abbott

- Status changed from New to Resolved

- Assignee set to John Abbott

- % Done changed from 0 to 50

I have written a first impl (in MatrixOps-flatten.C).

Added doc.

No tests yet.

#4 - 02 Oct 2020 20:56 - John Abbott

- % Done changed from 50 to 60

I have checked in the code.

The fn names are **FlattenByRows** and **FlattenByCols**; it seems unnecessary to have Mat in the fn names!

#5 - 02 Oct 2020 20:56 - John Abbott

- Target version changed from *CoCoALib-0.99850* to *CoCoALib-0.99800*

#6 - 05 Oct 2020 14:39 - John Abbott

- Status changed from *Resolved* to *Feedback*

- % Done changed from 60 to 90

I have added a test to test-matrix4.C

#7 - 29 Oct 2020 21:36 - John Abbott

- Status changed from *Feedback* to *Closed*

- % Done changed from 90 to 100

- Estimated time set to 1.41 h