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