# CoCoA-5 - Feature #365

## add function to compute minimal generators (like Minimalize)

11 Jun 2013 14:56 - Anna Maria Bigatti

Status:	Closed	Start date:	11 Jun 2013	
Priority:	Normal	Due date:		
Assignee:	Anna Maria Bigatti	% Done:	100%	
Category:	CoCoA-4 function to be added	Estimated time:	4.25 hours	
Target version:	CoCoA-5.0.9	Spent time:	4.25 hours	
Description				
2014-04 added MinGens, MinGensGeneral (for ideals and submodules) minimalize, minimalized (for ideals)				
Related issues:				
Related to CoCoALib - Feature #366: function (CoCoALib) for minimal generator			Closed	11 Jun 2013
Related to CoCoALib - Feature #387: implement algorithm(s) for resolutions			New	23 Jul 2013
Category. CoCoA-4 inficition to be added Estimated time. 4.25 hours   Target version: CoCoA-5.0.9 Spent time: 4.25 hours   Description 2014-04 added MinGens, MinGensGeneral (for ideals and submodules) minimalize, minimalized (for ideals)   Related issues: Related to CoCoALib - Feature #366: function (CoCoALib) for minimal generator Closed 11 Jun 2013   Related to CoCoALib - Feature #387: implement algorithm(s) for resolutions New 23 Jul 2013				

#### History

#### #1 - 01 Aug 2013 08:29 - Anna Maria Bigatti

- Status changed from New to Resolved

### #2 - 21 Mar 2014 10:03 - Anna Maria Bigatti

- % Done changed from 0 to 70

updated manual (will not work on quotients, no need). Still lacking: module -- is that *essentially* trivial? (modulo putting together the right parts of code)

#### #3 - 21 Mar 2014 10:27 - Anna Maria Bigatti

I implemented **GeneralMinGens** for the non-homogeneous case: it does the obvious check on every generator. Obviously it works on homogeneous input as well (but slower than **MinGens**)

Currently in NotBuiltIn

#### #4 - 25 Mar 2014 12:36 - Anna Maria Bigatti

Still missing: function on submodules! If we have that working than we can have a silly/slow but working version of resolutions. Can I manage?

#### #5 - 26 Mar 2014 17:09 - Anna Maria Bigatti

- Status changed from Resolved to Feedback

- % Done changed from 70 to 90

Was tougher than I expected: ironically the core code (GBasis) was all done, but updating the module/submodule/FGModule code required much care (was I careful enough?)

### #6 - 02 Apr 2014 17:37 - Anna Maria Bigatti

- Status changed from Feedback to Closed

- % Done changed from 90 to 100

## #7 - 15 May 2015 11:18 - Anna Maria Bigatti

- Estimated time set to 4.50 h

## #8 - 15 May 2015 11:19 - Anna Maria Bigatti

- Estimated time changed from 4.50 h to 4.25 h