CoCoALib - Feature #91

Return type & name for "indets" of a PP

11 Feb 2012 14:04 - John Abbott

Status:	Closed		**Start date:**	11 Feb 2012
Priority:	High		**Due date:**	
Assignee:	John Abbott		**% Done:**	100%
Category:	New Function		**Estimated time:**	2.44 hours
Target version:	CoCoALib-0.99700		**Spent time:**	2.45 hours

Description
JAA has recently added the fn indets to be applied to a PP. Its return type is vector<long> being a list (ordered?) of the indices of the indets which actually appear in the PP. Is this a good rtn type? If so, what should the fn name be? Is indets acceptable? A similar fn has been added in SparsePolyRing for polynomials; analogous qns apply.

Related issues:			
Related to CoCoALib - Feature #658: Indets actually in a poly (or vector or m...		**Closed**	**22 Jan 2015**

History

#1 - 05 Oct 2013 11:09 - John Abbott

- Category set to New Function

- Status changed from New to In Progress

The return type vector<long> can easily be modelled in CoCoA-5 (as LIST of INT). However, do note that in C++ the indices start from 0 whereas in CoCoA-5 they start from 1; this ought not to matter (so long as the values are used simply to refer to indets).

Anna said she did not like the name **indets** to be applicable to RINGELEM; part of the reason was because a simple typo indets(f) instead of indets(RingOf(f)) would produce code which still runs (and probably gives the correct output in many cases).

We do not yet have a good suggestion for a better name (not too long, but clear in its meaning).

#2 - 09 Oct 2013 18:09 - John Abbott

Name suggestions:

- **IndetSupport**

Related fns could be **DependsOn** as in DependsOn(f,x). Would we need both fns?

#3 - 29 Oct 2013 13:06 - Anna Maria Bigatti

- Target version set to CoCoALib-0.99532

#4 - 02 Apr 2014 07:51 - Anna Maria Bigatti

- Priority changed from Normal to High

- Target version changed from CoCoALib-0.99532 to CoCoALib-0.99533 Easter14

we need to change the name

#5 - 02 Apr 2014 07:52 - Anna Maria Bigatti

- Subject changed from Rtn type & name for "indets" of a PP to Return type & name for "indets" of a PP

#6 - 07 Apr 2014 18:10 - John Abbott

- Target version changed from CoCoALib-0.99533 Easter14 to CoCoALib-0.99534 Seoul14

#7 - 10 Jul 2014 16:31 - John Abbott

- Target version changed from CoCoALib-0.99534 Seoul14 to CoCoALib-1.0

#8 - 29 Jun 2015 16:44 - John Abbott

- % Done changed from 0 to 10

JAA observes that we already have some vaguely similar functions:

- radical(PP) same as gcd(PP,product(all_indets))
- exponents(expv,PP) non-zero exponent means the PP is present

#9 - 13 Feb 2020 17:46 - John Abbott

- Status changed from In Progress to Closed

- Assignee set to John Abbott

- Target version changed from CoCoALib-1.0 to CoCoALib-0.99700

- % Done changed from 10 to 100

- Estimated time set to 1.66 h

This has already been done, apparently.
There is a fn called **indets** which returns a vector<long> being a list of indet indices.
The fn **radical** is similar to the recently added fn **IndetsProd**.

Not convinced by the name...
Closing anyway (but I might change the name soon, before release).

#10 - 14 Feb 2020 13:26 - John Abbott

- Estimated time changed from 1.66 h to 2.44 h

The name is now **IndetsIn** the same name for the analogous fn for RingElem.