

## CoCoALib - Feature #91

### Return type & name for "indets" of a PP

11 Feb 2012 14:04 - John Abbott

<b>Status:</b>	Closed	<b>Start date:</b>	11 Feb 2012
<b>Priority:</b>	High	<b>Due date:</b>	
<b>Assignee:</b>	John Abbott	<b>% Done:</b>	100%
<b>Category:</b>	New Function	<b>Estimated time:</b>	2.44 hours
<b>Target version:</b>	CoCoALib-0.99700	<b>Spent time:</b>	2.45 hours
<b>Description</b>			
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.			
<b>Related issues:</b>			
Related to CoCoALib - Feature #658: Indets actually in a poly (or vector or m...		<b>Closed</b>	<b>22 Jan 2015</b>

### 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*.