CoCoA-5 - Bug #1745

Printing of Hilbert series via indent

22 May 2023 21:02 - John Abbott

Status:	Closed	Start date:	22 May 2023
Priority:	Normal	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	bug	Estimated time:	1.67 hour
Target version:	CoCoA-5.4.2	Spent time:	1.70 hour

Description

Printing of Hilbert series is "strange":

```
/**/ use R ::= QQ[t,x,y,z];
/**/ HilbertSeries(R/ideal(t^2, x, y^3));
(1 + 2*t + 2*t^2 + t^3) / (1-t)
/**/ L := [It]; L; -- as element of a list (or record)
[tagged(record[DenFactors := record[RemainingFactor := 1, factors := [-t +1], multiplicities := [4
]], num := -t^6 +t^5 +t^4 -t^2 -t +1], "$hp.PSeries")]
/**/ indent(L);  – printing via indent
**[
  (1 + 2t + 2t^2 + t^3) / (1-t)
]
```

Related issues:

Related to CoCoA-5 - Bug #1475: HilbertSeries: make into proper rational func...	**New**	**06 Aug 2020**
Related to CoCoA-5 - Design #376: Hilbert: Redesign hp.cpkg5 and public funct...	**In Progress**	**18 Jun 2013**

History

#1 - 22 May 2023 21:07 - John Abbott

- Status changed from New to Resolved

- Assignee set to John Abbott

- % Done changed from 0 to 60

There was a bug in sppoly.cpkg5 where the asterisk was printed directly rather than to the output stream D.
Now corrected -- I shall check in shortly.

Not sure about printing via print when a Hilbert series is in a list. Presumably this is only rarely tried (since no one has complained before now). The problem with using the special printing function is that it make the list almost impossible to read.

Oscar uses 3 levels of printing: *pretty printing*, *one-line printing* (*e.g.* for elems of a list), and *supercompact* (*e.g.* when the object appears at deeper levels of nesting).

#2 - 22 May 2023 21:09 - John Abbott

- Related to Bug #1475: HilbertSeries: make into proper rational function added

#3 - 22 May 2023 21:09 - John Abbott

- Related to Design #376: Hilbert: Redesign hp.cpkg5 and public functions in TmpHilbert.C added

#4 - 23 May 2023 12:11 - Anna Maria Bigatti

John Abbott wrote:

> There was a bug in sppoly.cpkg5 where the asterisk was printed directly rather than to the output stream D.
> Now corrected -- I shall check in shortly.

checked, ok

> Not sure about printing via print when a Hilbert series is in a list. Presumably this is only rarely tried (since no one has complained before now).
> The problem with using the special printing function is that it make the list almost impossible to read.

I think it is pretty unusual to print a list containing tagged objects without using indent.

> Oscar uses 3 levels of printing: *pretty printing*, *one-line printing* (*e.g.* for elems of a list), and *supercompact* (*e.g.* when the object appears at deeper levels of nesting).

Interesting, but not sure I want to do it

#5 - 23 May 2023 16:45 - Anna Maria Bigatti

- Status changed from Resolved to Feedback

- % Done changed from 70 to 90

added test in exbugs.cocoa5

#6 - 23 May 2023 18:59 - John Abbott

I think we can leaving printing in a list as it is (for the time being).
Tagged values are (often) ones which we print in a special way, so it is probably not appropriate to try to print them "cleverly" inside a list. If a better solution is needed then maybe we will have to think of a solution similar to that used in Oscar.

#7 - 22 Dec 2023 19:50 - John Abbott

- Status changed from Feedback to Closed

- Estimated time set to 1.67 h

The current situation is not "perfect" but probably good enough (until we encounter a real situation where a better solution is needed). Closing after 7 months in feedback.

#8 - 22 Dec 2023 20:10 - John Abbott

- % Done changed from 90 to 100