CoCoA-5 - Feature #633

New operations? ScalarProduct(MODULELEM,LIST), MATRIX * MODULELEM

14 Oct 2014 13:05 - Anna Maria Bigatti

Status:	New	**Start date:**	14 Oct 2014
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:	CoCoA-5.?.?	**Spent time:**	0.25 hour

Description

I think that ScalarProduct(MODULELEM,LIST) is OK
but MATRIX * MODULELEM may be ambiguous (row or col?)
For sure we should add examples to the manual

Related issues:

Related to CoCoALib - Design #703: Add more operations between modules (CoCoA...	**New**	**15 May 2015**
Related to CoCoA-5 - Support #1031: ScalarProduct: exact defn and manual page	**New**	**17 Mar 2017**

History

#1 - 13 May 2015 09:48 - Redmine Admin

- Target version set to CoCoA-5.?.?

#2 - 17 Mar 2017 10:55 - John Abbott

If we regard ScalarProduct(A,B) as being equivalent to sum([A[i]*B[i] | i in 1..len(A)]) then ScalarProduct should accept LIST (of INT/RAT/RINGELEM) and MODULEELEM. For instance:

```
F := NewFreeModule(R,3);
G := gens(F);
L := [1,2,3]; // LIST of INT
ScalarProduct(L,G); --> currently gives error
L[1]*G[1] + L[2]*G[2] + L[3]*G[3]; --> gives expected answer
```

#3 - 17 Mar 2017 11:01 - John Abbott

- Related to Support #1031: ScalarProduct: exact defn and manual page added