Logik för dataloger

Laboration 2

Datum: 2007-03-23
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Kurs: MATB14

Programkod

```prolog
:- op(200, fx, ~).
:- op(400, xfy, #).
:- op(400, xfy, &).
:- op(700, xfy, ->).
:- op(700, xfy, <->).

/*FREE IN*/

/*5 fall*/
  /*1. enbart variabel*/
  /*2. lista*/
  /*3. med all - här binds det*/
  /*4. med exists - här bind det*/
  /*5. formel*/


/*free_in(x,x)*/
free_in(Var,Var).

/*free_in(x,[x,y,z])*/
free_in(Var,[H|T]):-!,(free_in(Var,H);free_in(Var,T)).

/*free_in(x,all(x,y.....)).*/
free_in(Var1,all(Var2,T)):-!,Var1\=Var2,free_in(Var1,T).

/*free_in(x,exists(x,y.....)).*/
free_in(Var1,exists(Var2,T)):-!,Var1\=Var2,free_in(Var1,T).

/*free_in(x,all(x,p(x)->exists.....)*/
free_in(Var,F):-F=..[_|T],T\=[],!,free_in(Var,T).



/*RENAME VAR*/

/*lista*/
rename_var(Var,[H|T],Var2,[H2|Term]):-
!,rename_var(Var,H,Var2,H2),rename_var(Var,T,Var2,Term).

/*en variabel*/
rename_var(Var,Var,Var2,Var2):-!.
rename_var(Var,Var2,_,Var2):-Var\=Var2,Var2=..List,List=[_].

/*termer > Lista > Ny term*/
rename_var(Var,Term,Var2,Term2):-
   Term=..List,!,rename_var(Var,List,Var2,List2),Term2=..List2.
```