

Inference at * 2 1
of proof for Lemma before_last:

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1. T : Type
2. T List
3. u : T
4. v : T List
5.  $\forall x:T. (x \in v) \Rightarrow (\neg(x = \text{last}(v))) \Rightarrow x \text{ before last}(v) \in v$ 
6. x : T
7.  $(x = u) \vee (x \in v)$ 
8.  $\neg(x = \text{last}([u / v]))$ 
 $\vdash (x = u \ \& \ [\text{last}([u / v]) \subseteq v] \vee [x; \text{last}([u / v]) \subseteq v$ 
  by (((((((ParallelOp (-2))
CollapseTHEN (Auto_aux (first_nat 1:n) ((first_nat 1:n
  ),(first_nat 1000:n) (first_tok :t) inil_term))))).
CollapseTHEN (Reduce 0)).

  CollapseTHEN (SimpConcl)).)
CollapseTHEN (RWO "last_cons" 0)).)
CollapseTHEN (
  (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n) (first_tok :t) inil_term))).)

1: ...rewrite subgoal.... NILNIL

  7. x = u
  8.  $\neg(x = \text{last}([u / v]))$ 
 $\vdash \neg(\uparrow \text{null}(v))$ 
2:

  7. x = u
  8.  $\neg(x = \text{last}([u / v]))$ 
 $\vdash [\text{last}(v) \subseteq v$ 
3: ...rewrite subgoal.... NILNIL

  7.  $(x \in v)$ 
  8.  $\neg(x = \text{last}([u / v]))$ 
 $\vdash \neg(\uparrow \text{null}(v))$ 
4:

  7.  $(x \in v)$ 
  8.  $\neg(x = \text{last}([u / v]))$ 
 $\vdash [x; \text{last}(v) \subseteq v$ 
.

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[http://www.nuprl.org/FDLcontent/p0.963683./p122.89337-`{before.last}`2-1.html](http://www.nuprl.org/FDLcontent/p0.963683./p122.89337-<code>{before.last}</code>2-1.html)