

Inference at \* 1  
of proof for Lemma fincr\_wf:

$\vdash \{f \mid i:\mathbb{N} \rightarrow \text{if } (i =_0 0) \text{ then } \mathbb{Z} \text{ else } \{f(i - 1)\dots\} \text{ fi}\} \in \text{Type}$   
by With  $\lambda i,j. i < j$  MemCD

1: .....subterm..... T:t1:n

$\vdash \mathbb{N} \in \text{Type}$

2: .....subterm..... T:t2:n

$\vdash (\lambda i,j. i < j) \in \mathbb{N} \rightarrow \mathbb{N} \rightarrow \text{Type}$

3: .....eq aux..... NILNIL

$\vdash \downarrow \text{WellFnd}\{1\}(\mathbb{N}; u, v. (\lambda i,j. i < j)(u, v))$

4: .....eq aux..... NILNIL

1.  $i : \mathbb{N}$

2.  $f : \{f \mid i:\{z:\mathbb{N} \mid z (\lambda i,j. i < j) i\} \rightarrow \text{if } (i =_0 0) \text{ then } \mathbb{Z} \text{ else } \{f(i - 1)\dots\} \text{ fi}\}$   
 $\vdash \text{if } (i =_0 0) \text{ then } \mathbb{Z} \text{ else } \{f(i - 1)\dots\} \text{ fi} \in \text{Type}$

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