Write a program to read an infinite sequence, and after every even number of inputs, to output a binary value saying whether the second half of the input so far is a repetition of the first half.

§ Let the reading channel be $c$, and let the writing channel be $d$. The specification is $S$, defined as

$$S = \forall n: \text{nat} . \text{Monad}_{\text{wd},\ldots,\text{wd}+n} = (\text{Monad}_{\text{rc},\ldots,\text{rc}+n} = \text{Monad}_{\text{rc}+n:\ldots,\text{rc}+2n})$$

Let $f$ (first) and $s$ (second) be string variables, and define specification $P$ as

$$P \equiv \text{NOT YET DONE}$$

The refinements are

$$S \iff f \equiv \text{nil}. \ s \equiv \text{nil}. \ P$$

$$P \iff d! f = s\. \ c\. \ s \equiv s\. \ c\. \ f \equiv f\ s_0\. \ s \equiv s_1: \ldots s\ c\. \ P$$