Suppose we add laws to allow various operators to distribute over string catenation (semi-colon). For example, if $i$ and $j$ are items and $s$ and $t$ are strings, then the laws

\[ \text{nil} + \text{nil} = \text{nil} \]

\[ (i; s) + (j; t) = i+j; s+t \]

say that strings are added item by item (a sum of strings is a string of sums). For example,

\[(2; 4; 7) + (3; 9; 1) = 5; 13; 8\]

What string $f$ is defined by

\[ f = 0; 1; f+f_{1;...\infty} \]

The Fibonacci sequence $0; 1; 1; 2; 3; 5; 8; 13; 21; 34; ...$ usually defined as

\[ f_0 = 0 \]

\[ f_1 = 1 \]

\[ f_{n+2} = f_n + f_{n+1} \]