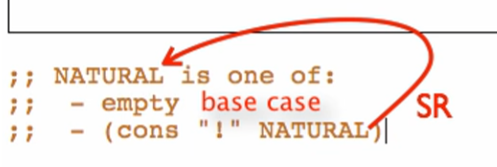


Data definition of NATURAL (our own definition of Natural)

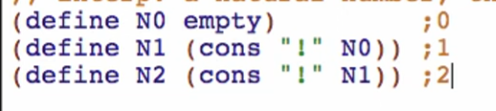
1. Type comment

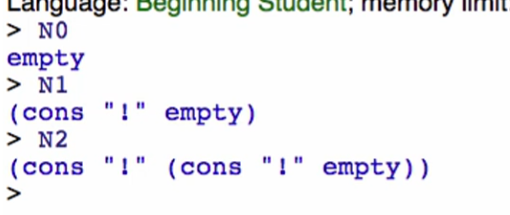


1. Interpretation

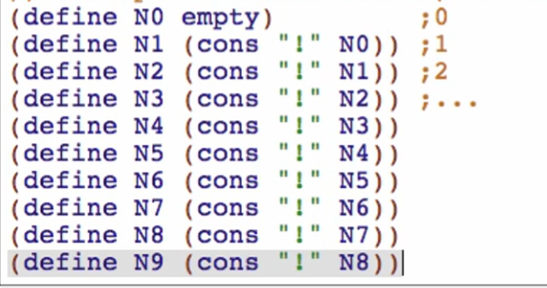


1. Examples

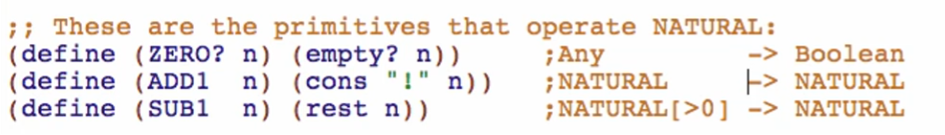




Adding more:

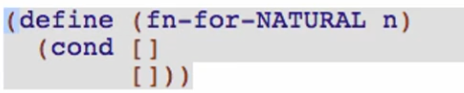


Defining our own primitives that we’ll use for our own NATURAL

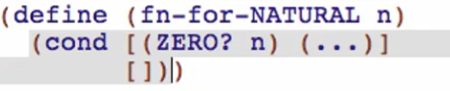


1. Template

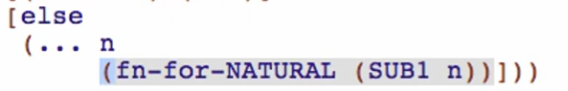
One of 2 cases:



Case 1/base case: atomic distinct: ZERO



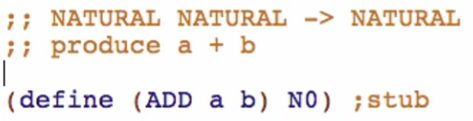
Case 2: compound 2 fields with self-reference (SUB1 n)



Making a function for **Adding 2 Naturals**:

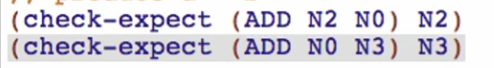
Function definition

1. Signature, purpose, and stub



1. Examples

For base case: 2 scenarios -> one for each addend side

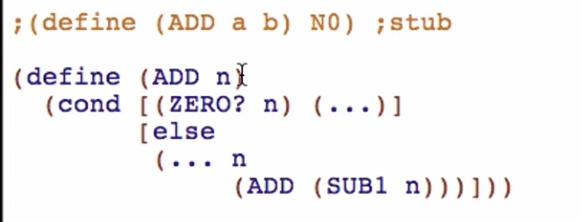


For other cases: at least 2 elements

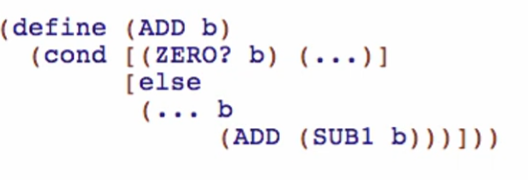


1. Template

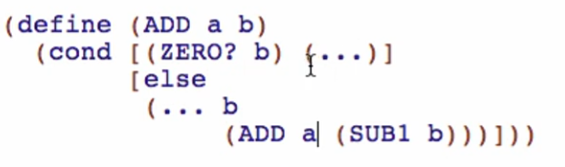
Copy template, rename the functions and natural recursion



Renaming the parameters

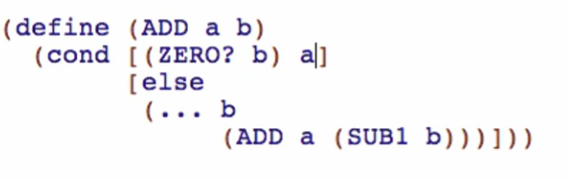


Then add the parameter a



1. Code body

Base case result:



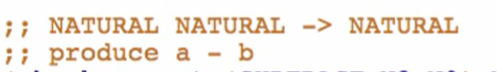
Other cases:



1. Test and debug

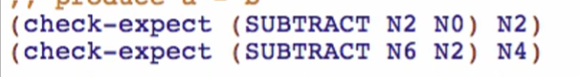
Making a function for **Subtracting 2 Naturals**:

1. Signature, purpose, stub





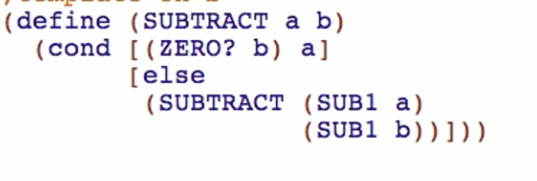
1. Examples



1. Template

Template from data definition

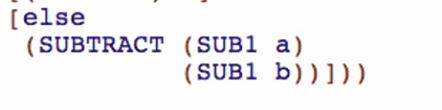
1. Code body



Base case:

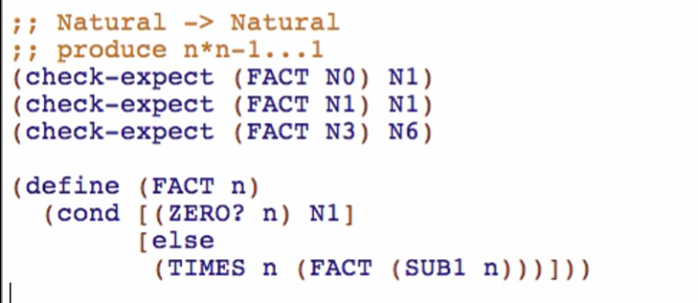


Other case:

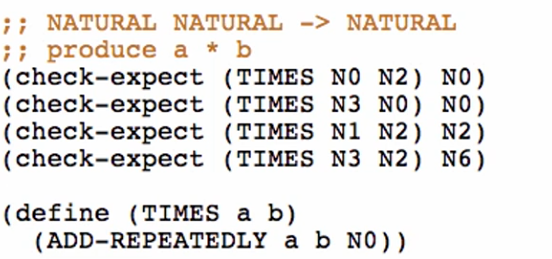


Other functions:

FACTORIAL



TIMES



ADD-REPEATEDLY

