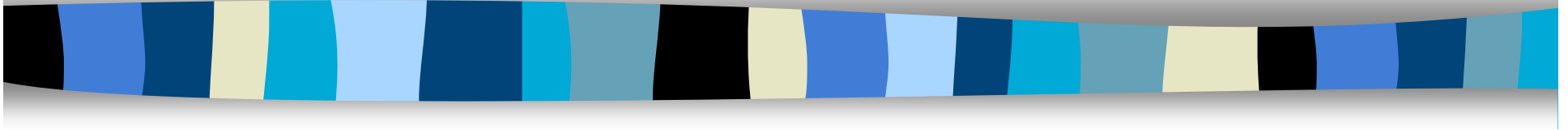


# Mutually Recursive Definitions





## Example

A parent is a structure  
(make-parent l n) where  
l is a list-of-children, n is a symbol

A list-of-children is either  
empty, or  
(cons p l) where  
p is a parent and l is a list of children



# Template

- **One** function on any of these types requires writing a set of functions for **all** the mutually recursive types
- Every different reference to a mutually recursive type **in definition** means we need a call to the appropriate function **in template**



# Another Example

A web-page is a structure

(make-wp s d)

where s is a symbol and p is a web-document

A web-document is either

empty,

(cons s d), or

(cons p d),

where s is a symbol, and p is a web-page, and d is a web-document



## For Next Class

- No homework for this week
- Midterm:
  - Next lecture (Wednesday)
  - In class. Closed book / notes / computer.
  - Chapters 1-13
- No quizzes until midterm