COMP 302 Lecture 6 16 September 2016

NB: Next week

- No office hours from the prof
- Limited access to email
- Monday's class → cancelled
- Wednesday's class → held by Stefan, regular expressions
- Friday's class → held by Francesco, Haskell

see 6c302

Append two lists (list1 and list2)

see 6c302-1

Reversing a list:

- a b c d e
    - I can take a, put it at the end, and reverse the remainder.
    - Although it is easy to add something at the beginning of a list, it is trickier to add something at the end of a list.

see 6c302-2

Create an isList(x) function that returns true if x is a list, false otherwise.
We are going to have to change cons:

see 6c302-3

see 6c302-4

More generally:

see 6c302-5

NB: we have been using lists.
Instead of pair (element | list)
We can have pair (list | list)

In that case, we can make trees.

see 6c302-6

Scopes
x = 3;
x is a variable. 3 is a value. I associate the two, so that if someone asks me what x is, I can answer 3.
This is a binding, an association between a variable and a value.

How do we know which bindings are available to us?
Variables (their bindings) have lifetimes.
see 6c302-7

Looking for variable-value bindings.