**CSE 341:** Programming Languages

Autumn 2006
Oct 13 — define-struct & misc

---

**A Few Miscellaneous Scheme Topics**

In DrScheme, you can use square brackets as well as parenthesis. (You need to match left parentheses with right parentheses, left square brackets with right square brackets.) Suggestion: use not at all, or sparingly for readability.

' is a macro — 'x and '(a b c) are equivalent to (quote x) and (quote (a b c)).

Scheme functions can take a variable number of arguments.

```scheme
(define (squid a b . c)
  (print a)
  (print b)
  (print c))
```

*squid* requires at least 2 arguments. Any remaining arguments (perhaps 0) are put into a list, which is bound to `c`.

---

**define-struct is special**

**Claim:** `define-struct` is not a function.

**Claim:** `define-struct` is not a macro.

It could be a macro except for one key bit of its semantics: Values built from the constructor cause every *other* predicate (including all built-in ones) to return `#f`.

Advantage: abstraction

Disadvantage: Can't write "generic" code that has a case for every possible variant in every Scheme program.