CS 5510 Homework 4

Due: Wednesday, September 23rd, 2015 11:59pm

Part 1 — Improving Assignment

Start with `store-with.rkt`. In the starting program, the representation of the store grows every time that a box's content is modified with `set-box!`. Change the implementation of `set-box!` so that the old value of the box is dropped (i.e., replaced with the new value) instead of merely hidden by the outside-in search order of `fetch`.

Example:

```
(test (interp (parse '{let {[b {box 1}]}
                        {begin
                         {set-box! b 2}
                         {unbox b}}})
              mt-env
              mt-store)
      (v*s (numV 2)
           (override-store (cell 1 (numV 2))
                           mt-store)))
```

Part 2 — Sequences

Generalize `begin` to allow one or more sub-expressions, instead of exactly two sub-expressions.

```
<Expr> = ...
       | {begin <Expr> <Expr>*}
```

Example:

```
(test (interp (parse '{let {[b {box 1}]}
                        {begin
                         {set-box! b {+ 2 {unbox b}}}
                         {set-box! b {+ 3 {unbox b}}}
                         {set-box! b {+ 4 {unbox b}}}
                         {unbox b}}})
              mt-env
              mt-store)
      (v*s (numV 10)
           (override-store (cell 1 (numV 10))
                           mt-store)))
```

Midterm Practice

See also the practice mid-term (but it's not to hand in).

Last update: Tuesday, September 15th, 2015

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