CS61A Discussion 7

((((((((((((((((((Scheme))))))))))))))))))

Common Misconceptions on OOP

- Plant.k is NOT the same as Plant().k
- An Object works similar to that of a function frame
  - There can only be one value mapped to a name (means new assignments will overwrite existing values)
- HOWEVER, unless you have a parent function frame, you cannot directly access class variables/global variables

More tips on how to get unstuck on coding problems

- Still relevant: Check the types!!!!
- Make sure you will eventually reach your base case (for recursion)
- Make sure you are using all your variables! (We will never give you useless variables)
- Make sure your base case works for the trivial case

Worksheet

Scheme Nitpicks

- eq?: Compares it's two arguments. If they are equal, it returns #t. Otherwise, it returns #f. Note: It does not work on lists (except when comparing to empty lists), pairs, vectors, symbols or strings. When it compares two variables, it compares the location they point to in memory, not the actual values.
- eqv?: Returns #t if it's arguments are equivalent, returns #f otherwise.
- equal?: Recursively applies eqv? to lists, vectors and strings. Otherwise it behaves like eqv?
- TLDR: use equal?

Scheme Nitpicks

- There is no `return` procedure in Scheme. The last evaluated expression is automatically returned.
- There is no iteration in Scheme. All functions are recursive (if need be)
- All lists in Scheme are Linked Lists