Self-reference in classes.

1. Questions?

2. Cleanup from Monday: managing floating point values.

   (a) When you want to convert a floating point value, \( f \), to a ratio of integers, \( r \), you can make use of the following observation:

   \[
   \text{cvt}(f) = \text{int}(f) + \frac{1}{\text{cvt}(1/f \mod 1)}
   \]

   which can be rewritten/unwound as many times as is desired. This leads to an interesting addition to the \texttt{Ratio} class.

   (b) Such an approximation is, in a sense, the closest approximation to the floating point value.

3. A new, more beautiful, definition of a list, a \texttt{LinkedList}.

   (a) Use \texttt{None} to represent an empty \texttt{LinkedList}.

   (b) Any other \texttt{LinkedList} is simply composed of two parts:

   i. a first element (its \texttt{car}): an object.

   ii. the remainder of the list (its \texttt{cdr}): a \texttt{LinkedList}.

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