Outline for February 29, 2012

1. Overview of bottom-up design
   a. Take existing pieces and combine them
   b. Keep building up until you have solved the problem

2. Example: compute binomial coefficients for \((1 + x)^n\)
   a. Need to read user input \([bc\cdot1.py]\)
   b. Need to compute factorials \([bc\cdot2.py]\)
   c. Need to print polynomial with integer coefficients \([bc\cdot3.py]\)
   d. Combine \([bc.py]\)

3. Example: Monte Carlo method for approximating \(\pi\) (random tosses onto a dart board)
   a. Need to generate where dart toss winds up \([mc\cdot1.py]\)
   b. Need to determine if it is in unit circle \([mc\cdot2.py]\)
   c. Need to read user input \([mc\cdot3.py]\)
   d. Combine \([mc.py]\)

4. Other approaches
   a. Prototyping and spiral development
   b. Agile development