ITP 365

Lecture 8

2/2/17

More Recursion

* Come up with a recursive solution to a problem you only need to convince
  + Base case is correct
  + Recursive call is provided parameters that are simpler in a useful way
* **Stack overflow – occurs if there are too many functions active at once**
  + **Usually happens when your base case is wrong**
  + To get past this, can use iterative solution using loop
    - But Fact(1000000) will give you 0 if using iterative solution because integer size will be greater than 4270 number or w/e -> luckily doesn’t crash program
* **Any recursive solution can be done iteratively and vice versa**
* Example Fibonacci Recursion
  + If n < 2, n
  + If n > 1, Fn-1 + Fn-2