Using Piazza

- [http://www.piazza.com/bu/fall2012/cs112a1](http://www.piazza.com/bu/fall2012/cs112a1)
- Any question related to the course
Using WebSubmit

- [Link: http://cs-websubmit.bu.edu/main.py?courseid=cs112]
- Submit all assignments via WebSubmit
Lab Sections and Office Hours

- **Attendance**

- **Office Hours:**
  - Tuesday. 5-6:30 p.m.
  - Wednesday. 3-4:30 p.m.

- **Tutoring Hour:**
  - [http://www.bu.edu/cs/resources/tutoring/](http://www.bu.edu/cs/resources/tutoring/)
Stack and Function

- Stack: Last In First Out (LIFO)
- Function
Recursive Function

- Same function, Different variables
Recursive Function

- Base Case (what to do with trivial inputs)
  - Terminating Conditions
  - Most logical errors occur at ‘Base Case’
  - Not only one base case, maybe many cases

- Recursive Call (how to solve the problem)
  - Most difficult part to design a recursive function
  - Understand which variables are changing, and which are constant.
Practice

- Implementing Exponentiation

- Write a function to recursively compute the function
  \[ f(x,n) = x^n \]

- Compare your results with the built-in java function
  \textit{Math.pow(x, n)}

- \( n \) is a non-negative integer
Practice

- Consider $f(x,n) = x^{(n/2)} \times x^{(n/2)}$

- What do you need to do if $n$ is odd?

- Count number of recursive calls

- Count time by using: `System.nanoTime()`