Introduction to:
Computers & Programming

Exercises Using:
Variables and Functions

Adam Meyers
New York University
Exercise 1: Calculate an Average of 5 Numbers

• Use the function *input*
  – *input*(prompt)
    • displays prompt
    • waits for user to type something
    • returns whatever the user types
• The program should allow the user to input 5 items
• At the end it should display the average
Problem 2: Calculate Birthday Biorhythms

• Go to http://en.wikipedia.org/wiki/Biorhythm

• Implement a function that given an age in number of days, would calculate and print one's biorhythms, i.e.,
  – def print_biorhythms(number_of_days): ...

• Write a function that calls print_biorhythms. It queries the user for their age and then gives them the biorythm for their next birthday (assuming no leap years).
Problem 3: Write a Mad Libs Program

• Mad Libs
  – A game in which a passage of text is assumed with various blanks that are typed by parts of speech: adverb, adjective, noun, verb, etc.

• We can create a program that plays this game interactively, prompting users to fill in these blanks

• Use the function `input again`
Mad Libs: Slide 2

• Choose a short self-contained text from the web, e.g., the first paragraph of Wikipedia's featured article of the day.

• Divide it into lines, with one print statement per line.

• Replace some of the words with variables indicating their part of speech.

• Precede print statements with queries to the user to set each of the variables.

• Encapsulate the above into an executable program.