Debugging and Printing

George Mason University
Today’s topics

• Review of Chapter 3: Printing and Debugging
• Go over examples and questions
• debugging in Python
Debugging and printing review

• How do we trace through code by hand?
• What is a print statement? How is it different than a return statement?

• What is a function? How do we call one?
Let’s go over the exercises
Printing and Functions in python

```python
def function():
    #YOUR CODE GOES BELOW HERE, MAKE SURE YOU INDENT!
    num1 = input("Please enter the first number: ")
    print "Number 1 is: " + str(num1)
    num2 = input("Please enter the second number: ")
    difference = num1 - num2
    print "The difference is: " + str(difference)
    return difference

print function()
```

- **print** is a keyword that prints out the expression that follows it
- **str** is actually a **function** that we call with an argument
- Any guesses what’s going on in the last and first line? (we’ll cover this in the future)
Debugging in python

• You can always use print statements to debug your code

• There are other tools that can save time if you just want to trace through the code once, not by hand:
  – [http://pythontutor.com/visualize.html#mode=edit](http://pythontutor.com/visualize.html#mode=edit)
  – in-class demo
Questions?