Week 13 Lab – **Printing a String Backwards**

Maximum Points = 10

Printing a string backwards can be done iteratively or recursively. To do it recursively, think of the following specification:

If *s* contains any characters (i.e., is not the empty string)

- print the last character in *s*
- print *s'* backwards, where *s'* is *s* without its last character

File *Backwards.java* contains a program that prompts the user for a string, then calls method *printBackwards* to print the string backwards. Save this file to your directory and fill in the code for *printBackwards* using the recursive strategy outlined above.

```
// ********************************************************************
//   Backwards.java
//
//   Uses a recursive method to print a string backwards.
// ********************************************************************
import java.util.Scanner;

public class Backwards
{

    //-----------------------------------------------------------------
    // Reads a string from the user and prints it backwards.
    //-----------------------------------------------------------------
    public static void main(String[] args)
    {
      String msg;
      Scanner scan = new Scanner(System.in);

      System.out.print("Enter a string: ");
      msg = scan.nextLine();

      System.out.print("\nThe string backwards: ");
      printBackwards(msg);
      System.out.println();
    }

    //-----------------------------------------------------------------
    // Takes a string and recursively prints it backwards.
    //-----------------------------------------------------------------
    public static void printBackwards(String s)
    {

      // Fill in code

    }
}
```

(Due before end of the day on Friday, November 12, 2010) Submit your .java files containing your program to the dropbox in WebCT.

Grades are determined using the following scale:

- Runs correctly..……:___/3
- Correct output……..……:___/2
- Design of output..……:___/1
- Design of logic.……:___/2
- Standards…….:___/1
- Documentation.……...:___/1