

# Week 11 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, April 1, 2011) 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