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