California State Polytechnic University, Pomona Computer Science Department

CS141: Introduction to Programming and Problem-Solving

Winter 2017

Instructor: Prof. Tony Diaz

Program 3 - Due Feb. 1

Name

(Total: 100 pts)

Write a noninteractive program titled "YourLastName_AsciiArt" that reads in lines of text from a file then prints out the text with different transformations around the vertical, horizontal, and diagonal axis. The program will accomplish this by reading in the text as a rectangular block of data into a 2D array of characters (char[][]). The program will create only one 2D array and will not copy from one array to another. The dimensions of the 2D array will be contained in the first line of the input file, row first and then columns.

For example, here is the contents of an input file ready for the program:

5 4

FILE

WITH

SOME

MORE

INFO

After reading in the text from the file, the program will "traverse" the rows and columns of the array (with nested for-loops) and print out the array in the proper order to do the following transformations shown in the example below.

The following shows an example interaction captured in a file by the command "% script AsciiArt.out":

Script started on Thu Sep 26 10:23:58 2013 % java Diaz_AsciiArt

Original Text:

FILE

WITH

SOME

MORE

INFO

Transformations:

INFO

MORE

SOME

WITH

FILE

ELIF HTIW EMOS EROM OFNI

FRMTL NOOII IMSWF

% exit

script done on Thu Sep 26 10:24:17 2013

Run the program with all different input files provided and capture all interaction in a file using the script command.

What to turn in:

- Soft copy of the script command (using Blackboard)
- Soft copy of the program (submit your .java file using Blackboard)