Project #2

Introduction to flex: Upside Down Mirror Writing

CpSc 8270: Language Translation

Computer Science Division, Clemson University

Brian Malloy, PhD

September 14, 2017

Due Date:

In order to receive credit for this assignment, your solution must meet the requirements specified in this document and be submitted, using the `handin` facility, by 8 AM, Friday, September 28^{th}, 2017. The handin close date is set at three days after the due date. If you submit after the due date but before the handin close date there will be a ten point deduction. No submissions will be accepted after the handin close date and no submissions will be accepted by email.

Project Specification:

The purpose of this project is to help you to become familiar with flex, a tool that recognizes regular expressions. To complete the project you must write a C^{++} program that accepts text as input and writes the text upside down and backwards. To get full credit you must use flex to read all input to your program, your C^{++} code must be well organized and use good practices, and you must be able to handle the characters illustrated in Figure 1 and on the first web page listed below.

Some helpful web sites that contain information on upside down text and mirror writing can be found at:

`https://en.wikipedia.org/wiki/Transformation_of_text#Examples`
`http://www.upsidedowntext.com/unicode`
`https://en.wikipedia.org/wiki/Mirror_writing`
`http://www.twiki.org/cgi-bin/view/Blog/BlogEntry201211x1`

z	ʎ	x	ʍ	ʌ	n	ʇ	s	ɹ	b	d	o	u	ɯ	l	ʞ	ɾ	¡	ɥ	ɓ	ɟ	ə	p	ɔ	q	ɐ
007A	028E	0078	028D	028C	006E	0287	0073	0279	0062	0064	006F	0075	026F	006C	029E	027E	0131	0265	0253	025F	01DD	0070	0254	0071	0250
Z	ʎ	X	M	Λ	∩	⊥	S	ʁ	Ↄ	ᗡ	O	N	W	ᒐ	⋊	ɾ	I	H	Ꭾ	ꟻ	Ǝ	ᗡ	Ↄ	ᗺ	∀
005A	2144	0058	004D	039B	2229	22A5	0053	1D1A	038C	0500	004F	004E	0057	2142	22CA	017F	0049	0048	2141	2132	018E	15E1	0186	10412	2200
0	6	8	ㄥ	9	5	ϐ	Ɛ	ƻ	ι																
0030	0036	0038	3125	0039	03DA	07C8	218B	218A	21C2																
⁘	‾	¿	¡	„	ˌ	˙	'	؛																	
214B	203E	00BF	00A1	201E	002C	02D9	0027	061B																	

Figure 1: **Hex codes to translate characters from normal to upside down**.