Programming Template

		Assembly Code	Addr num	Machine Code (Hex)	Description of Operation	Register Contents After Instruction Execution							
						r7	r6	r5	r4	r3	r2	r1	r0
Brodric Young #13	B (42)	LD r7, 0x4	0	1704	Load “4” into r7	4							
		LD r4, 0x2	1	1402	Load “2” into r4	4			2				
		DISP r7, r4	2	3074	Display {r7, r4} on ASCII display	4			2				
	r (72)	LD r5, 0x7	3	1507	Load “7” into r5	4		7	2				
		DISP r5, r4	4	3054	Display {r5, r4} on ASCII display	4		7	2				
	o (6F)	LD r3, 0x6	5	1306	Load “6” into r3	4		7	2	6			
		LD r2, 0xF	6	120F	Load “F” into r2	4		7	2	6	F		
		DISP r3, r2	7	3032	Display {r3, r2} on ASCII display	4		7	2	6	F		
	d (64)	DISP r3, r7	8	3037	Display {r3, r7} on ASCII display	4		7	2	6	F		
	r (72)	DISP r5, r4	9	3054	Display {r5, r4} on ASCII display	4		7	2	6	F		
	i (69)	LD r6, 0x9	A	1609	Load “9” into r6	4	9	7	2	6	F		
		DISP r3, r6	B	3036	Display {r3, r6} on ASCII display	4	9	7	2	6	F		
	c (63)	LD r1, 0x3	C	1103	Load “3” into r1	4	9	7	2	6	F	3	
		DISP r3, r1	D	3031	Display {r3, r1} on ASCII display	4	9	7	2	6	F	3	
	spc (20)	LD r0, 0x0	E	1000	Load “0” into r0	4	9	7	2	6	F	3	0
		DISP r4, r0	F	3040	Display {r4, r0} on ASCII display	4	9	7	2	6	F	3	0
	Y (59)	LD r0, 0x5	10	1005	Load “5” into r0	4	9	7	2	6	F	3	5
		DISP r0, r6	11	3006	Display {r0, r6} on ASCII display	4	9	7	2	6	F	3	5
	o (6F)	DISP r3, r2	12	3032	Display {r3, r2} on ASCII display	4	9	7	2	6	F	3	5
	u (75)	DISP r5, r0	13	3050	Display {r5, r0} on ASCII display	4	9	7	2	6	F	3	5
	n (6E)	LD r0, 0xE	14	100E	Load “E” into r0	4	9	7	2	6	F	3	E
		DISP r3, r0	15	3030	Display {r3, r0} on ASCII display	4	9	7	2	6	F	3	E
	g (67)	DISP r3, r5	16	3035	Display {r3, r5} on ASCII display	4	9	7	2	6	F	3	E
	spc (20)	LD r0, 0x0	17	1000	Load “0” into r0	4	9	7	2	6	F	3	0
		DISP r4, r0	18	3040	Display {r4, r0} on ASCII display	4	9	7	2	6	F	3	0
	# (23)	DISP r4, r1	19	3041	Display {r4, r1} on ASCII display	4	9	7	2	6	F	3	0
	1 (31)	LD r0, 0x1	1a	1001	Load “1” into r0	4	9	7	2	6	F	3	1
		DISP r1, r0	1b	3010	Display {r1, r0} on ASCII display	4	9	7	2	6	F	3	1
	3 (33)	DISP r1, r1	1c	3011	Display {r1, r1} on ASCII display	4	9	7	2	6	F	3	1
4+2=6	Linefeed	LD r6, 0x0	1d	1600	Load “0” into r6	4	0	7	2	6	F	3	1
		LD r5, 0xA	1e	150A	Load “A” into r5	4	0	A	2	6	F	3	1
		DISP r6, r5	1f	3065	Display {r6, r5} on ASCII display	4	0	A	2	6	F	3	1
	4 (34)	DISP r1, r7	20	3017	Display {r1, r7} on ASCII display	4	0	A	2	6	F	3	1
	+ (2B)	LD r2, 0xB	21	120B	Load “B” into r2	4	0	A	2	6	B	3	1
		DISP r4, r2	22	3042	Display {r4, r2} on ASCII display	4	0	A	2	6	B	3	1
	2 (32)	DISP r1, r4	23	3014	Display {r1, r4} on ASCII display	4	0	A	2	6	B	3	1
	= (3D)	LD r0, 0xD	24	100D	Load “D” into r0	4	0	A	2	6	B	3	D
		DISP r1, r0	25	3010	Display {r1, r0} on ASCII display	4	0	A	2	6	B	3	D
	6 (36)	ADD r3, r7, r4	26	7374	Add {r7, r4} place result in r3	4	0	A	2	6	B	3	D
		DISP r1, r3	27	3013	Display {r1, r3} on ASCII display	4	0	A	2	6	B	3	D
4*2=8	Linefeed	DISP r6, r5	28	3065	Display {r6, r5} on ASCII display	4	0	A	2	6	B	3	D
	4 (34)	DISP r1, r7	29	3017	Display {r1, r7} on ASCII display	4	0	A	2	6	B	3	D
	* (2A)	DISP r4, r5	2a	3045	Display {r4, r5} on ASCII display	4	0	A	2	6	B	3	D
	2 (32)	DISP r1, r4	2b	3014	Display {r1, r4} on ASCII display	4	0	A	2	6	B	3	D
	= (3D)	DISP r1, r0	2c	3010	Display {r1, r0} on ASCII display	4	0	A	2	6	B	3	D
	8 (38)	ADD r3, r7, r7	2d	7377	Add {r7, r7} place result in r3	4	0	A	2	8	B	3	D
		DISP r1, r3	2e	3013	Display {r1, r3} on ASCII display	4	0	A	2	8	B	3	D

4-2=2	Linefeed	DISP r6, r5	2f	3065	Display {r6, r5} on ASCII display	4	0	A	2	8	B	3	D
	4 (34)	DISP r1, r7	30	3017	Display {r1, r7} on ASCII display	4	0	A	2	8	B	3	D
	- (2D)	DISP r4, r0	31	3040	Display {r4, r0} on ASCII display	4	0	A	2	8	B	3	D
	2 (32)	DISP r1, r4	32	3014	Display {r1, r4} on ASCII display	4	0	A	2	8	B	3	D
	= (3D)	DISP r1, r0	33	3010	Display {r1, r0} on ASCII display	4	0	A	2	8	B	3	D
	2 (32)	LD r2, 0xF	34	120F	Load “F” into r2	4	0	A	2	8	F	3	D
		XOR r0, r2, r4	35	4024	XOR {r2, r4} place result in r0	4	0	A	2	8	F	3	D
		LD r2, 0x1	36	1201	Load “1” into r2	4	0	A	2	8	1	3	D
		ADD r3, r0, r2	37	7302	Add {r0, r2} place result in r3	4	0	A	2	E	1	3	D
		ADD r4, r3, r7	38	7437	Add {r3, r7} place result in r4	4	0	A	2	E	1	3	D
		DISP r1, r4	39	3014	Display {r1, r4} on ASCII display	4	0	A	2	E	1	3	D
4-2=2	Linefeed	DISP r6, r5	3a	3065	Display {r6, r5} on ASCII display	4	0	A	2	E	1	3	D
	4 (34)	DISP r1, r7	3b	3017	Display {r1, r7} on ASCII display	4	0	A	2	E	1	3	D
	- (2D)	DISP r4, r0	3c	3040	Display {r4, r0} on ASCII display	4	0	A	2	E	1	3	D
	2 (32)	DISP r1, r4	3d	3014	Display {r1, r4} on ASCII display	4	0	A	2	E	1	3	D
	= (3D)	DISP r1, r0	3e	3010	Display {r1, r0} on ASCII display	4	0	A	2	E	1	3	D
	2 (32)	SUB r3,r7, r4	3f	F374	Sub {r7, r4} place result in r3	4	0	A	2	2	1	3	D
		DISP r1, r3	40	3013	Display {r1, r3} on ASCII display	4	0	A	2	2	1	3	D