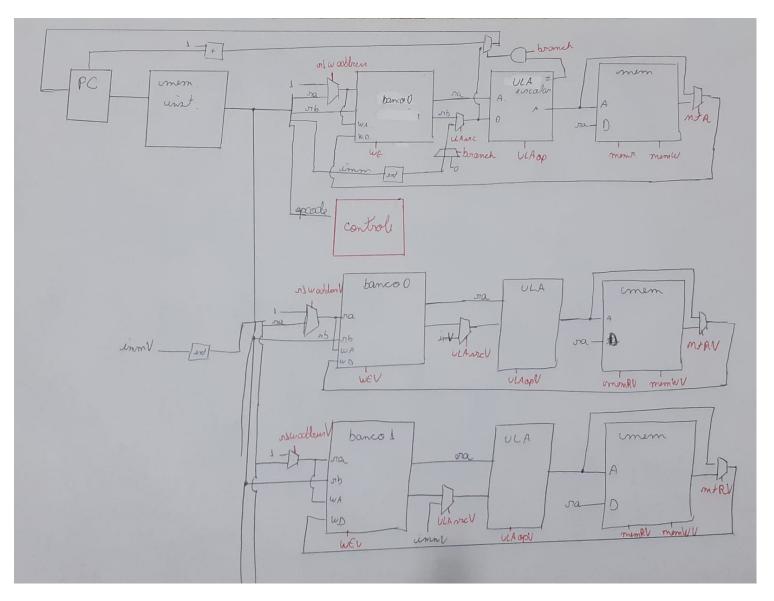
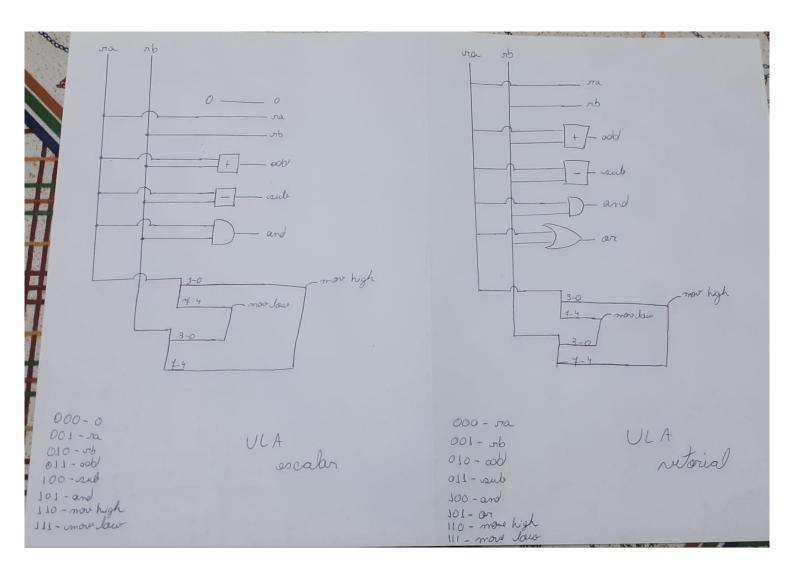
Trabalho de Arquitetura Nome: Heloísa Dias Viotto GRR: 20231942





			Cont	role Esca	lar			
Opcode	R1_W_Address	WE	ULAsrc	ULAop	MEMr	MEMW	MEMtoREG	branch
0000	0	1	0	010	1	0	1	0
0001	0	0	0	010	0	1	0	0
0010	1	1	1	110	0	0	0	0
0011	1	1	1	111	0	0	0	0
0100	0	1	0	011	0	0	0	0
0101	0	1	0	100	0	0	0	0
0110	0	1	0	101	0	0	0	0
0111	0	0	1	100	0	0	0	1
1000	-	0	_	_	_	0	_	0
1001	-	0	_	_	_	0	_	0
1010	-	0	_	_	_	0	_	0
1011	-	0	_	_	_	0	_	0
1100	-	0	-	_	_	0	_	0
1101	-	0	-	-	_	0	-	0
1110	-	0	_	_	_	0	-	0
1111	-	0	_	_	_	0	-	0

Controle Vetorial												
Opcode	R1_W_Addressy	Wey	ULAsrcv	ULAopy	MEMry	MEMwy	MEMtoREGy					
0000	-	0	_	_	_	0	-					
0001	-	0	_	_	_	0	-					
0010	-	0	_	_	_	0	-					
0011	-	0	_	-	-	0	-					
0100	-	0	_	-	_	0	-					
0101	-	0	_	-	-	0	-					
0110	-	0	-	-	-	0	-					
0111	-	0	-	-	-	0	-					
1000	0	1	0	001	1	0	1					
1001	0	0	0	001	0	1	0					
1010	1	1	1	110	0	0	0					
1011	1	1	1	111	0	0	0					
1100	0	1	0	010	0	0	0					
1101	0	1	0	011	0	0	0					
1110	0	1	0	100	0	0	0					
1111	0	1	0	101	0	0	0					

Individual

INSTRUÇÃO	TIPO	MENEMONICO	OPCODE	RA	RB	IMM	BINÁRIO	HEXADECIMAL
0	E	movh	0010			0011	00100011	23
1	E	movl	0011			0010	00110010	32
2	E	add	0100	10	01		01001001	49
3	E	movh	0010			0000	00100000	20
4	E	movl	0011			0101	00110101	35
5	E	add	0100	11	10		01001110	4e
6	E	sub	0101	11	01		01011101	5d
7	E	and	0110	10	01		01101001	69
8	E	st	0001	10	01		00011001	19
9	E	load	0000	11	01		00001101	d
10	V	movh	1010			0011	10100011	a3
11	V	movl	1011			0010	10110010	b2
12	V	add	1100	10	01		11001001	с9
13	V	movh	1010			0000	10100000	a0
14	V	movl	1011			0101	10110101	b5
15	V	add	1100	11	10		11001110	ce
16	V	sub	1101	11	01		11011101	dd
17	V	and	1110	10	01		11101001	e9
18	V	or	1111	01	11		11110111	f7
19	V	st	1001	10	00		10011000	98
20	V	ld	1000	11	00		10001100	8c
21	E	brzr	0111	00	01		01110001	71

Vetor

	VELUI									
INSTRUÇÃO		TIPO	MENEMONICO	OPCODE	RA	RB	IMM	BINÁRIO	HEXADECIMAL	COMENTÁRIO
								Preenche V	/etor 1	
0		V	movh	1010			0000	10100000	a0	
1		V	movl	1011			0100	10110100	b4	VR[3] = 4 (incremento)
2		V	add	1100	11	01		11001101	çd	
3		V	add	1100	10	00		11001000	c8	VR[2] = endereço e valor do vetor (0-11)
4		E	movh	0010			0001	00100001	21	
5		E	movl	0011			0011	00110011	33	SR[3] = endereço do fim do <u>loop</u> (19)
6		E	add	0100	11	01		01001101	4d	
7		E	movh	0010			0000	00100000	20	
8		E	movl	0011			0011	00110011	33	SR[2] = controle do laco (3)
9		E	add	0100	10	01		01001001	49	
10	LOOP:	E	brzr	0111	10	11		01111011	7b	Condição para o <u>loop</u>
11		V	<u>st</u>	1001	10	10		10011010	9A	$\underline{MEM[VR[2]]} = \underline{VR[2]}$
12		V	add	1100	10	11		11001011	<u>cb</u>	$\frac{VR[2] = VR[2] + VR[3](4)}{VR[2] + VR[3](4)}$
13		E	movh	0010			0000	00100000	20	
14		E	movl	0011			0001	00110001	31	SR[2] = SR[2] – SR[1] (1) Atualiza o controle
15		E	sub	0101	10	01		01011001	59	
16		E	movh	0010			0000	00100000	20	SR[1] = endereço do inicio do loop (10)
17		E	movl	0011			1010	00111010	3A	SK[1] - chacreço ao inicio ao goop (10)
18		E	brzr	0111	00	01		01110001	71	Jump para o inicio do loop

								Zera Regist	radores	
19		E	and	0110	11	00		01101100	6c	SR[3] = 0
20		V	movh	1010	╙	╙	0000	10100000	a0	VR[1] = 0
21		V	movl	1011			0000	10110000	bo	
22		V	and	1110	10	01		11101001	e9	<u>VR</u> [2] = 0
23		V	and	1110	11	01		11101101	ed	<u>VR</u> [3] = 0
			_					Preenche V		
24		Е	movh	0010			0011	00100011	23	
25		Е	movl	0011			0101	00110101	35	SR[3] = endereço do fim do <u>loop</u> (53)
26		Е	add	0100	11	01		01001101	4d	
27		Е	movh	0010			0000	00100000	20	
28		Е	movl	0011			0011	00110011	33	SR[2] = 3 Controle do loop
29		Е	add	0100	10	01		01001001	49	
30	LOOP:	E	brzr	0111	10	11		01111011	7b	Condição para o loop
31		V	movh	1010			0000	10100000	a 0	
32		V	movl	1011			0000	10110000	bo	Zera SR[2]
33		V	and	1110	10	01		11101001	e9	
34		V	movh	1010			0000	10100000	a0	
35		V	movl	1011			1100	10111100	<u>bc</u>	VR[2] = 12 Endereço Inicial
36		V	add	1100	10	01		11001001	с9	
37		V	movh	1010			0001	10100001	a1	VR[1] = 20 Valor Inicial
38		V	movl	1011			0100	10110100	b4	3.55[1] - 20
39		V	add	1100	01	00		11000100	c4	VR[1] = VR[1] + VR[0] + VR[3] Acrescenta ID e incremento
40		V	add	1100	01	11		11000111	с7	mail - mail - mail - mail - mail - meremento
41		V	add	1100	10	00		11001000	с8	VR[2] = VR[2] + VR[0] + VR[3] Acrescenta ID e incremento
42		V	add	1100	10	11		11001011	<u>cb</u>	yk[2] - yk[2] + yk[0] + yk[3] Acrescenta iD e incremento
43		V	<u>st</u>	1001	01	10		10010110	96	MEM[VR[2]] = VR[1]
44		V	movh	1010			0000	10100000	a 0	
45		V	movl	1011			0100	10110100	b4	VR[3] = VR[3] + 4 Atualiza o incremento
46		V	add	1100	11	01		11001101	cd	
47		E	movh	0010			0000	00100000	20	
48		Е	movl	0011			0001	00110001	31	SR[2] = SR[2] - SR[1] (1) Atualiza o controle
49		-	_							
-		E	sub	0101	10	01		01011001	59	
50		E	sub moyh	0101 0010	10	01	0001			cn[s] _ and areas de inicia de lean (20)
			_		10	01	0001 1110	01011001	59	SR[1] = endereço do inicio do <u>loop</u> (30)
50		E	movh	0010	00			01011001 00100001	59 21	SR[1] = endereço do inicio do <u>loop</u> (30) <u>Jump</u> para o inicio do <u>loop</u>
50 51		E E	movh movl	0010 0011			1110	01011001 00100001 00111110 01110001	59 21 3e 71	
50 51 52		E E E	movh movl brzr	0010 0011 0111	00	01	1110	01011001 00100001 00111110 01110001 Zera Registr	59 21 3e 71	Jump para o inicio do <u>loop</u>
50 51 52		E E E	movh movl brzr	0010 0011 0111	00		1110	01011001 00100001 00111110 01110001 Zera Registr 01101100	59 21 3e 71 radores	
50 51 52 53 54		E E E V	movh movl brzr and movh	0010 0011 0111 0110 1010	00	01	0000	01011001 00100001 00111110 01110001 Vera Registr 01101100 10100000	59 21 3e 71 radores 6c a0	Jump para o inicio do <u>loop</u> SR[3] = 0
50 51 52 53 54 55		E E E V V	movh movl brzr and movh movl	0010 0011 0111 0110 1010 1011	11	00	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000	59 21 3e 71 radores	Jump para o inicio do loop SR[3] = 0 VR[1] = 0
50 51 52 53 54		E E V V V V	movh movl brzr and movh movl and	0010 0011 0111 0110 1010	11 10	00	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000 11101001	59 21 3e 71 radores 6c a0 b0 e9	Jump para o inicio do loop SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[2] = 0
50 51 52 53 54 55		E E E V V	movh movl brzr and movh movl	0010 0011 0111 0110 1010 1011	11	00	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000	59 21 3e 71 radores 6c a0 b0	Jump para o inicio do loop $SR[3] = 0$ $VR[1] = 0$
50 51 52 53 54 55 56		E E V V V V	movh movl brzr and movh movl and	0010 0011 0111 0110 1010 1011 1110	11 10	00	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000 11101001 11101101	21 3e 71 radores 6c a0 b0 e9 ed	Jump para o inicio do loop SR[3] = 0 VR[1] = 0 VR[2] = 0
50 51 52 53 54 55 56 57		E E E V V V	movh movl brzr and movh movl and and	0010 0011 0111 0110 1010 1011 1110	11 10	00	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000 11101001 11101101	59 21 3e 71 radores 6c a0 b0 e9 ed	Jump para o inicio do loop
50 51 52 53 54 55 56 57		E E V V V V E	movh movl and movh and and and movh movl and and	0010 0011 0111 0110 1010 1011 1110 1110	11 10	00	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000 11101001 11101101 Preenche V	59 21 3e 71 radores 6c a0 b0 e9 ed	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3
50 51 52 53 54 55 56 57		E E V V V V E E E	movh movl and movh movl and and movh movl	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011	11 10 11	01 01 01	0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00110010	59 21 3e 71 radores 6c a0 b0 e9 ed	Jump para o inicio do loop
50 51 52 53 54 55 56 57 58 59 60		E E V V V V V E E E E	movh movl and movh movl and and movh and and and	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100	11 10	00	0000 0000 0101 0101	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00110010	59 21 3e 71 radores 6c a0 b0 e9 ed	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3
50 51 52 53 54 55 56 57 58 59 60 61		E E V V V V V E E E E E	movh movl and and and movh movl and and and and movh movl add movh	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100	11 10 11	01 01 01	0000 0000 0101 0010	01011001 00100001 0011110 01111001 Cera Registr 01101100 10100000 1101001 11101101 Preenche V 00100101 00110010 01001101	59 21 3e 71 radores 6c a0 b0 e9 ed	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0
50 51 52 53 54 55 56 57 58 59 60 61 62		E E V V V V V E E E E E E E	movh movl and and and movh movl and and and movh movl and movh movl	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011	10 11 11	01 01 01 01	0000 0000 0101 0101	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 1101001 11101101 Preenche V 00100101 00110010 01001101 001001000 00110011	59 21 3e 71 radores 6c a0 b0 e9 ed	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3
50 51 52 53 54 55 56 57 58 59 60 61		E E V V V V V E E E E E E E E	movh movl and and and movh movl and and and and movh movl add movh	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100	11 10 11	01 01 01	0000 0000 0101 0010 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 1101001 11101101 Preenche V 00100101 00100101 00100101 00100101 001001	59 21 3e 71 radores 6c a0 b0 e9 ed	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0
50 51 52 53 54 55 56 57 58 59 60 61 62		E E V V V V V V V V V V V V V V V V V V	movh movl and and and movh movl and and and movh movl and movh movl	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010	10 11 11	01 01 01 01	0000 0000 0101 0010 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 1101001 11101101 Preenche V 00100101 00110010 00110010 00110010 00110011 010010	721 3e 71 7adores 6c a0 b0 e9 ed 7tetor 3 25 32 4d 20 33 49 a0	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 SR[3] = endereço do fim do loop (82) SR[2] = 3 Controle do loop
50 51 52 53 54 55 56 57 58 59 60 61 62 63		E E V V V V V V V V V V V V V V V V V V	movh movl and and and movh movl and and movh movl add movh movl add movh movl add movh movl	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100	11 10 11 11 10	01 01 01 01 01	0000 0000 0101 0010 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 1101001 11101101 Preenche V 00100101 00100101 00100101 00100101 001001	71 3e 71 4d 20 33 49	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64		E E V V V V V V V V V V V V V V V V V V	movh movl and and movh movl and and movh movl add movh movl add movh movl add add movh add	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010	10 11 11	01 01 01 01	0000 0000 0101 0010 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 1101001 11101101 Preenche V 00100101 00110010 00110010 00110010 00110011 010010	59 21 3e 71 radores 6c a0 b0 e9 ed //etor 3 25 32 4d 20 33 49 a0 b0 c9	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 SR[3] = endereço do fim do loop (82) SR[2] = 3 Controle do loop VR[2] = 0 VR[2]
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	LOOP:	E E V V V V V V V V E	movh movl brzr and movh movl and and movh movl add movh movl add movh add brzr	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1010	11 10 11 11 10	01 01 01 01 01	0000 0000 0101 0010 0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00100101 00100101 01001001 1010010	71 3e	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 SR[3] = endereço do fim do loop (82) SR[2] = 3 Controle do loop
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	LOOP:	E E V V V V V V V V V V V V V V V V V V	movh movl and and movh movl and and movh movl add movh movl add movh movl add add movh add	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1010 1010	11 10 11 11 10 10	01 00 01 01 01	0000 0000 0101 0010 0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00100101 00100101 01001001 10100000 10100000 10100000 10100000 1100100	59 21 3e 71 radores 6c a0 b0 e9 ed //etor 3 25 32 4d 20 33 49 a0 b0 c9	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 SR[3] = endereço do fim do loop (82) SR[2] = 3 Controle do loop VR[2] = 0 Condição para o loop
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67	LOOP:	E E V V V V V V V V E	movh movl brzr and movh movl and and movh movl add movh movl add movh add brzr	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1011 1100 0111	11 10 11 11 10 10	01 00 01 01 01	0000 0000 0101 0010 0000 0011	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00100101 00100101 01001001 10100000 101100000 101100000 101100000 101100000 101100001	7etor 3 25 32 4d 20 33 49 a0 b0 c9 7b	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 SR[3] = endereço do fim do loop (82) SR[2] = 3 Controle do loop VR[2] = 0 VR[2]
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	LOOP:	E E V V V V V V V V V V V V V V V V V V	movh movl brzr and movh movl and and movh movl add movh movl add brzr movh	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1010 1010 1010 1010	11 10 11 10 10 10 10	01 00 01 01 01	0000 0000 0101 0000 0011 0000 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00110010 00100101 10100000 101100000 101100000 1100100	59 21 3e 71 radores 6c a0 b0 e9 ed 7etor 3 25 32 4d 20 33 49 a0 b0 c9 7b a1	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 VR[3] = 0 VR[2] = 0 VR[1] = 24 Endereço Inicial
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69	LOOP:	E E V V V V V V V V V V V V V V V V V V	movh movl brzr and movh movl and and movh movl add movh movl add brzr movh movl	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1010 1010 1011 1100 1110	11 10 11 10 10 10 10	01 01 01 01 01 01 11	0000 0000 0101 0000 0011 0000 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 11101001 11101101 Preenche V 00100101 00110010 00110010 10100000 1010010	59 21 3e 71 radores 6c a0 b0 e9 ed Vetor 3 25 32 4d 20 33 49 a0 b0 c9 7b a1 b8	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 SR[3] = endereço do fim do loop (82) SR[2] = 3 Controle do loop VR[2] = 0 Condição para o loop
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70	LOOP:	E E V V V V V V V V V V V V V V V V V V	movh movl brzr and movh movl and and movh movl add movh movl add brzr movh movl add brzr movh add	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1010 1010 1011 1100 1110	11 10 11 11 10 10 10 10 10 01	01 01 01 01 01 01 11	0000 0000 0101 0000 0011 0000 0000	01011001 00100001 00111110 01110001 Zera Registr 01101100 10100000 10110000 11101101 Preenche V 00100101 00110010 00110010 101001001 10100000 1100100	59 21 3e 71 radores 6c a0 b0 e9 ed Vetor 3 25 32 4d 20 33 49 a0 b0 c9 7b a1 b8 c7	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 VR[3] = 0 VR[2] = 0 VR[1] = 24 Endereço Inicial
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71	LOOP:	E E V V V V V V V V V V V V V V V V V V	movh movl brzr and movh movl and and movh movl add movh movl add brzr movh movl add brzr movh movl add brzr movh movl add brzr movh movl add	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1011 1100 1110 1100	11 10 11 11 10 10 10 10 10 10 10 10 10 1	01 01 01 01 01 01 11 11	0000 0000 0101 0000 0011 0000 0000	01011001 00100001 0011110 01110001 Zera Registr 01101100 10100000 10110000 1110101 Preenche V 00100101 00110010 00100101 10100000 1010010	59 21 3e 71 radores 6c a0 b0 e9 ed Vetor 3 25 32 4d 20 33 49 a0 b0 c9 7b a1 b8 c7 c4	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 VR[3] = 0 VR[2] = 0 VR[1] = 24 Endereço Inicial VR[1] = VR[1] + VR[0] + VR[3] Acrescenta ID e incremento
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72	LOOP:	E E V V V V V V V V V V V V V V V V V V	movh movl brzr and movh movl and and movh movl add movh movl add movh movl add movh movl add add add brzr movh movl add brzr movh movl add	0010 0011 0111 0110 1010 1011 1110 1110 0010 0011 0100 0011 0100 1010 1011 1100 1110 1100 1100	11 10 11 11 10 10 10 10 10 10 10 10 10 1	01 01 01 01 01 01 11 11	0000 0000 0101 0000 0011 0000 0000 000	01011001 00100001 0011110 01110001 Cera Registr 01101100 10100000 10110000 1110101 Preenche V 00100101 00110010 00100101 10100000 1100100	59 21 3e 71 radores 6c a0 b0 e9 ed Vetor 3 25 32 4d 20 33 49 a0 b0 c9 7b a1 b8 c7 c4 99	SR[3] = 0 VR[1] = 0 VR[2] = 0 VR[3] = 0 VR[3] = 0 VR[3] = 0 VR[2] = 0 VR[1] = 24 Endereço Inicial VR[1] = VR[1] + VR[0] + VR[3] Acrescenta ID e incremento

76	E	movh	0010			0000	00100000	20				
77	E	movl	0011			0001	00110001	31	SR[2] = SR[2] - SR[1] (1) Atualiza o controle			
78	E	sub	0101	10	01		01011001	59				
79	E	movh	0010			0100	00100100	24	SR[1] = endereço do inicio do loop (67)			
80	E	movl	0011			0011	00110011	33	SK[1] = endereço do micio do 100p (61)			
81	E	brzr	0111	00	01		01110001	71	Jump para o inicio do loop			
							. D					
						-	Zera Regist	radores				
82	E	and	0110	11	00		01101100	6c	SR[3] = 0			
83	V	and	1110	11	10		11101110	ee	<u>VR</u> [3] = 0			

								Soma Vet	ores	
84		E	movh	0010			0111	00100111	27	
85		Е	movl	0011			0110	00110110	36	SR[3] = endereço do fim do <u>loop</u> (118)
86		E	add	0100	11	01		01001101	4d	
87		E	movh	0010			0000	00100000	20	
88		E	movl	0011			0011	00110011	33	SR[2] = 3 Controle do loop
89		E	add	0100	10	01		01001001	49	
90	LOOP:	E	brzr	0111	10	11		01111011	7b	Condição para o <u>loop</u>
91		V	movh	1010			0000	10100000	a0	
92		V	movl	1011			1100	10111100	bc	VR[2] = 12 Endereço Inicial do Vetor 2
93		V	add	1100	10	00		11001000	c8	
94		V	add	1100	10	01		11001001	c9	VR[2] = VR[2] + VR[0] + VR[3] Acrescenta ID e incremento
95		V	add	1100	10	11		11001011	cb	135[2] - 135[2] · 135[0] · 135[0] · 101000000000 ib c incremente
96		V	movl	1011			0000	10110000	bo	VR[1] = 0 Endereço Inicial do Vetor 1
97		V	add	1100	01	00		11000100	c4	VR[1] = VR[1] + VR[0] + VR[3] Acrescenta ID e incremento
98		V	add	1100	01	11		11000111	c7	yangi - yangi - yangi - yangi - rereseenta ib e meremento
99		V	ld	1000	01	01		10000101	85	VR[1] = MEM[VR[1]]
100		V	ld	1000	10	10		10001010	8A	<u>VR[2] = MEM[VR[2]]</u>
101		V	add	1100	10	01		11001001	c9	VR[2] = VR[2] + VR[1] Soma dos Vetores
102		V	movh	1010			0001	10100001	a1	VR[1] = 24 Endereço Inicial do Vetor 3
103		V	movl	1011			1000	10111000	b8	ymilij - 24 - Endereço iniciar do vecor 3
104		V	add	1100	01			11000100	C4	VR[1] = VR[1] + VR[0] + VR[3] Acrescenta ID e incremento
105		V	add	1100	01	11		11000111	c7	
106		V	st .	1001	10	01		10011001	99	MEM[VR[1]] = VR[2]
107		V	movh	1010			0000		a0	emfel emfel
108		V	movl	1011			0100	10110100	b4	VR[3] = VR[3] + 4 Atualiza o incremento
109		V	add	1100	11	01		11001101	cd	
110		V	movl	1011			0000		bo	VR[2] = 0
111		V	and	1110	10	01		11101001	е9	····L 1
112		E	movh	0010			0000		20	
113		E	movl	0011			0001	00110001	31	SR[2] = SR[2] – SR[1] (1) Atualiza o controle
114		E	sub	0101	10	01		01011001	59	
115		E	movh	0010			0101	00100101	25	SR[1] = endereço do inicio do loop (90)
116		E	movl	0011			1010	00111010	3A	
117		E	brzr	0111	00	01		01110001	71	Jump para o inicio do loop
118										