

## Guará em Matilha (Vetorial)

Vector Architecture				
Opcode	Tipo	Menemonico	Nome	Operação
Scalar				
0000	R	ld	Load	$SR[ra] = M[SR[rb]]$
0001	R	st	Store	$M[SR[rb]] = SR[ra]$
0010	I	movh	Move High	$SR[1] = \{Imm., SR[1](3:0)\}$
0011	I	movl	Move Low	$SR[1] = \{SR[1](7:4), Imm.\}$
0100	R	add	Add	$SR[ra] = SR[ra] + SR[rb]$
0101	R	sub	Sub	$SR[ra] = SR[ra] - SR[rb]$
0110	R	and	And	$SR[ra] = SR[ra] \& SR[rb]$
0111	R	brzr	Branch On Zero Register	if ( $SR[ra] == 0$ ) $PC = SR[rb]$
Vector				
1000	R	ld	Load	$VR[ra] = M[VR[rb]]$
1001	R	st	Store	$M[VR[rb]] = VR[ra]$
1010	I	movh	Move High	$VR[1] = \{Imm., VR[1](3:0)\}$
1011	I	movl	Move Low	$VR[1] = \{VR[1](7:4), Imm.\}$
1100	R	add	Add	$VR[ra] = VR[ra] + VR[rb]$
1101	R	sub	Sub	$VR[ra] = VR[ra] - VR[rb]$
1110	R	and	And	$VR[ra] = VR[ra] \& VR[rb]$
1111	R	or	Or	$VR[ra] = VR[ra]   VR[rb]$
			<b>4x Vector PE</b>	<b>Scalar PE</b>
SR -> Scalar register			4 Regs por PE (1° = ID, 3x GP)	4 Regs (1° = ZERO, 3x GP)
VR -> Vectorial register			VR0 = {0,1,2,3} dependendo do PE	SR0 = 0
			1 Memória por PE	1 Memória exclusiva
			Apenas 1 dos PEs atuam, ou VPE ou SPE	

Tipo R							
7	6	5	4	3	2	1	0
opcode				Ra		Rb	

Tipo I							
7	6	5	4	3	2	1	0
opcode				Imm			

