

Repertori d'instruccions del MIPS32				R	op	rd	rs	rt	shamt	funct						
				I	op	rs	rt	immediate / offset								
				J	op	target										
Grp	Significat de la instrucció	Format en ensamblador	Operació	MF	31	26	25	21	20	16	15	11	10	6	5	0
	Load Word	lw rt, offset(rs)	$rt \leftarrow \text{MemWord}[(rs)_u + \text{offset}_s]$	(W <sup>*</sup> )	I	100011	rs	rt	offset							
	Load Byte	lb rt, offset(rs)	$rt \leftarrow \text{MemByte}[(rs)_u + \text{offset}_s]$	(S <sup>*</sup> ) (U <sup>*</sup> )	I	100000	rs	rt	offset							
	Store Word	sw rt, offset(rs)	$\text{MemWord}[(rs)_u + \text{offset}_s] \leftarrow (rt)$	(W <sup>*</sup> )	I	101011	rs	rt	offset							
	Store Byte	sb rt, offset(rs)	$\text{MemByte}[(rs)_u + \text{offset}_s] \leftarrow (rt)_{7..0}$		I	101000	rs	rt	offset							
	Load Upper Immediate	lui rt, immediate	$rt \leftarrow \text{immediate} \parallel 0^{16}$		I	001111	00000	rt	immediate							
	Move From Hi Register	mfhi rd	$rd \leftarrow (\text{Hi})$		R	000000	00000	00000	rd	00000	010000					
	Move From Lo Register	mflo rd	$rd \leftarrow (\text{Lo})$		R	000000	00000	00000	rd	00000	010010					
	Add Word	add rd, rs, rt	$rd \leftarrow (rs)_s + (rt)_s$	(U <sup>*</sup> )	R	000000	rs	rt	rd	00000	100000					
	Add Immediate Word	addi rt, rs, immediate	$rd \leftarrow (rs)_s + \text{immediate}_s$	(U <sup>*</sup> )	I	001000	rs	rt	immediate							
	Subtract Word	sub rd, rs, rt	$rd \leftarrow (rs)_s - (rt)_s$	(U <sup>*</sup> )	R	000000	rs	rt	rd	00000	100010					
	Multiply Word to GPR	mul rd, rs, rt	$rd \leftarrow ((rs)_s * (rt)_s)_{31..0}$		R	011100	rs	rt	rd	00000	000010					
	Multiply Word	mult rs, rt	$\text{Hi} \leftarrow ((rs)_s * (rt)_s)_{63..32}; \text{Lo} \leftarrow ((rs)_s * (rt)_s)_{31..0}$	(U <sup>*</sup> )	R	000000	rs	rt	00000	00000	011000					
	Divide Word	div rs, rt	$\text{Lo} \leftarrow (rs)_s \text{ div } (rt)_s; \text{Hi} \leftarrow (rs)_s \text{ mod } (rt)_s$	(U <sup>*</sup> )	R	000000	rs	rt	00000	00000	011010					
	Set on Less Than	slt rd, rs, rt	$\text{if } ((rs)_s < (rt)_s) \text{ then } rd \leftarrow 1 \text{ else } rd \leftarrow 0$	(U <sup>*</sup> )	R	000000	rs	rt	rd	00000	101010					
	Set on Less Than Immediate	slti rt, rs, immediate	$\text{if } ((rs)_s < \text{immediate}_s) \text{ then } rd \leftarrow 1 \text{ else } rd \leftarrow 0$	(U <sup>*</sup> )	I	001010	rs	rt	immediate							
	Branch On Equal	beq rs, rt, offset	$\text{if } ((rs) == (rt)) \text{ then } PC \leftarrow (PC) + \text{offset}_s \parallel 0^2 \text{ else } PC \leftarrow (PC) + 4$		I	000100	rs	rt	offset							
	Branch On Not Equal	bne rs, rt, offset	$\text{if } ((rs) \neq (rt)) \text{ then } PC \leftarrow (PC) + \text{offset}_s \parallel 0^2 \text{ else } PC \leftarrow (PC) + 4$		I	000101	rs	rt	offset							
	Branch On Greater Than Zero	bgtz rs, offset	$\text{if } ((rs)_s > 0) \text{ then } PC \leftarrow (PC) + \text{offset}_s \parallel 0^2 \text{ else } PC \leftarrow (PC) + 4$		I	000111	rs	00000	offset							
	Branch On Less Than Zero	bltz rs, offset	$\text{if } ((rs)_s < 0) \text{ then } PC \leftarrow (PC) + \text{offset}_s \parallel 0^2 \text{ else } PC \leftarrow (PC) + 4$		I	000001	rs	00000	offset							
	Jump	j target	$PC \leftarrow (PC)_{31..28} \parallel \text{target} \parallel 0^2$		J	000010	target									
	Jump Register	jr rs	$PC \leftarrow (rs)$	(L <sup>*</sup> )	R	000000	rs	00000	00000	00000	001000					
	Jump And Link	jal target	$\$31 \leftarrow (PC) + 4; PC \leftarrow \text{target} \parallel 0^2$		J	000011	target									
	And	and rd, rs, rt	$rd \leftarrow (rs) \text{ and } (rt)$		R	000000	rs	rt	rd	00000	100100					
	Or	or rd, rs, rt	$rd \leftarrow (rs) \text{ or } (rt)$		R	000000	rs	rt	rd	00000	100101					
	Exclusive Or	xor rd, rs, rt	$rd \leftarrow (rs) \text{ xor } (rt)$		R	000000	rs	rt	rd	00000	100110					
	Shift Word Left Logical	sll rd, rt, n	$rd \leftarrow rt_{(31-n)..0} \parallel 0^n$		R	000000	000000	rt	rd	n	000000					
	Shift Word Right Arithmetic	sra rd, rt, n	$rd \leftarrow rt_{31}^n \parallel rt_{31..n}$		R	000000	000000	rt	rd	n	000011					
	Shift Word Right Logical	srl rd, rt, n	$rd \leftarrow 0^n \parallel rt_{31..n}$		R	000000	000000	rt	rd	n	000010					

(U<sup>\*</sup>) Tenen variant sense signe (afegint una *u* al mnemònic). La instrucció *lbu* canvia el camp *op* pel valor 100100, *addiu* i *sltiu* incrementen en 1 el camp *op* i la resta incrementen en 1 el camp *funct*.  
(S<sup>\*</sup>) S'extén el signe del byte llegit a 32 bits al registre. (L<sup>\*</sup>) El valor d' *rs* ha d'estar alineat a paraula. (W<sup>\*</sup>) L'adreça ha d'estar alineada a paraula.  $V \parallel 0^n$  Indica la concatenació del valor *V* amb *n* zeros.