

instruction	example	meaning
add	add \$1,\$2,\$3	$\$1 = \$2 + \$3$
subtract	sub \$1,\$2,\$3	$\$1 = \$2 - \$3$
add immediate	addi \$1,\$2,100	$\$1 = \$2 + 100$
add unsigned	addu \$1,\$2,\$3	$\$1 = \$2 + \$3$
subtract unsigned	subu \$1,\$2,\$3	$\$1 = \$2 - \$3$
add immediate unsigned	addiu \$1,\$2,100	$\$1 = \$2 + 100$
move from coprocessor register	mfc0 \$1,\$epc	$\$1 = \$epc$
multiply	mult \$2,\$3	hi, lo = $\$2 * \$3$
multiply unsigned	multu \$2,\$3	hi, lo = $\$2 * \$3$
divide	div \$2,\$3	lo = $\$2 / \$3$ ; hi $\$2 \bmod \$3$
divide unsigned	div \$2,\$3	lo = $\$2 / \$3$ ; hi $\$2 \bmod \$3$
move from hi	mfhi \$1	$\$1 = hi$
move from low	mflo \$1	$\$1 = lo$
and	and \$1,\$2,\$3	$\$1 = \$2 \& \$3$
or	or \$1,\$2,\$3	$\$1 = \$2   \$3$
and immediate	andi \$1,\$2,100	$\$1 = \$2 \& 100$
or immediate	ori \$1,\$2,100	$\$1 = \$2   100$
shift left logical	sll \$1,\$2,10	$\$1 = \$2 \ll 10$
shift right logical	srl \$1,\$2,10	$\$1 = \$2 \gg 10$
load word	lw \$1,100(\$2)	$\$1 = \text{memory} [\$2 + 100]$
store word	sw \$1,100(\$2)	$\text{memory} [\$2 + 100] = \$1$
load upper immediate	lui \$1,100	$\$1 = 100 \times 2^{16}$
branch if equal	beq \$1,\$2,100	if ( $\$1 = \$2$ ), $PC = PC + 4 + 100$
branch if not equal	bne \$1,\$2,100	if ( $\$1 \neq \$2$ ), $PC = PC + 4 + 100$
set if less than	slt \$1, \$2, \$3	if ( $\$2 < \$3$ ), $\$1 = 1$ else $\$1 = 0$
set if less than immediate	slti \$1, \$2, 100	if ( $\$2 < 100$ ), $\$1 = 1$ else $\$1 = 0$
set if less than unsigned	sltu \$1, \$2, \$3	if ( $\$2 < \$3$ ), $\$1 = 1$ else $\$1 = 0$
set if less than immediate unsigned	sltiu \$1, \$2, 100	if ( $\$2 < 100$ ), $\$1 = 1$ else $\$1 = 0$
jump	j 10000	$PC = 10000$
jump register	jr \$31	$PC = \$31$
jump and link	jal 10000	$\$31 = PC + 4$ ; $PC = 10000$