

add

000000		rs		rt		rd		00000		100000	
31	26	25	21	20	16	15	11	10	6	5	0

Add instruction (trap on overflow)
 $\text{Reg}[\text{rd}] \leftarrow \text{Reg}[\text{rs}] + \text{Reg}[\text{rt}]$

addi

001000		rs		rt		imm	
31	26	25	21	20	16	15	0

Add immediate (trap on overflow)
 $\text{Reg}[\text{rt}] \leftarrow \text{Reg}[\text{rs}] + \text{imm}^\pm$

addiu

001001		rs		rt		imm	
31	26	25	21	20	16	15	0

Add immediate (ignore overflow, note imm is still sign extended)
 $\text{Reg}[\text{rt}] \leftarrow \text{Reg}[\text{rs}] + \text{imm}^\pm$

addu

000000		rs		rt		rd		00000		100001	
31	26	25	21	20	16	15	11	10	6	5	0

Add instruction (ignore overflow)
 $\text{Reg}[\text{rd}] \leftarrow \text{Reg}[\text{rs}] + \text{Reg}[\text{rt}]$

and

000000		rs		rt		rd		00000		100100	
31	26	25	21	20	16	15	11	10	6	5	0

Bitwise logical AND
 $\text{Reg}[\text{rd}] \leftarrow \text{Reg}[\text{rs}] \text{ AND } \text{Reg}[\text{rt}]$

andi

001100		rs		rt		imm	
31	26	25	21	20	16	15	0

Bitwise logical AND with immediate
 $\text{Reg}[\text{rt}] \leftarrow \text{Reg}[\text{rs}] \text{ AND } \text{imm}^\emptyset$

bc1f

010001	01000	cc	0	0	imm
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31 26 25 21 20 16 15 0

Branch if coprocessor 1 (FPU) false

$PC \leftarrow (cc = 0) ? PC + \text{offset}^{\pm} : PC + 1$

bc1t

010001	01000	cc	0	1	imm
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31 26 25 21 20 16 15 0

Branch if coprocessor 1 (FPU) true

$PC \leftarrow (cc = 1) ? PC + \text{offset}^{\pm} : PC + 1$

beq

000100	rs	rt	offset
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31 26 25 21 20 16 15 0

Branch if equal

$PC \leftarrow (rs = rt) ? PC + \text{offset}^{\pm} : PC + 1$

bgez

000001	rs	0001	offset
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31 26 25 21 20 16 15 0

Branch if greater than or equal to zero

$PC \leftarrow (rs \geq 0) ? PC + \text{offset}^{\pm} : PC + 1$

bgtz

000111	rs	0000	offset
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31 26 25 21 20 16 15 0

Branch if greater than zero

$PC \leftarrow (rs > 0) ? PC + \text{offset}^{\pm} : PC + 1$

blez

000110	rs	0000	offset
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31 26 25 21 20 16 15 0

Branch if less than or equal to zero

$PC \leftarrow (rs \leq 0) ? PC + \text{offset}^{\pm} : PC + 1$

bltz

000001	rs	0000	offset
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31 26 25 21 20 16 15 0

Branch if less than zero

$PC \leftarrow (rs < 0) ? PC + \text{offset}^{\pm} : PC + 1$

bne

000101	rs	rt	offset
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31 26 25 21 20 16 15 0

Branch if less not equal

$PC \leftarrow (rs \neq rt) ? PC + offset^{\pm} : PC + 1$

ceq
cfc1
cge
cgt
cle
clt
cne
ctc1
fabs
fadd
fdiv
fma
fmul
fneg
fsqrt
fsub
j
jr
lb
lbu
lh
lhu
lui
lw
lwc0
lwc1
mfc0
mfc1
mov
mtc0
mtc1
nor
or
ori
pre
r