

## A Guide to MIPS for Muggles

Instruction	Description
move \$dst, \$src	Copy src register to dest register
add \$dst, \$src1, \$src2	Store \$src1 + \$src2 in \$dst
add \$dst, \$src1, constant	Store \$src1 + constant in \$dst
sub \$dst, \$src1, \$src2	Store \$src1 - \$src2 in \$dst
sub \$dst, \$src1, constant	Store \$src1 - constant in \$dst
mul \$dst, \$src1, \$src2	Store \$src1 * \$src2 in \$dst
mul \$dst, \$src1, constant	Store \$src1 * constant in \$dst
j label	Jump to the given label
bgt \$src1, \$src2, label	Jump to label if \$src1 > \$src2
bge \$src1, \$src2, label	Jump to label if \$src1 ≥ \$src2
blt \$src1, \$src2, label	Jump to label if \$src1 < \$src2
ble \$src1, \$src2, label	Jump to label if \$src1 ≤ \$src2
beq \$src1, \$src2, label	Jump to label if \$src1 = \$src2
bne \$src1, \$src2, label	Jump to label if \$src1 ≠ \$src2
beqz \$src1, label	Jump to label if \$src1 = 0
bnez \$src1, label	Jump to label if \$src1 ≠ 0
la \$dst, label	Load the address into \$dst
li \$dst, constant	Load the constant into \$dst
lw \$dst, label	Load the word at label into \$dst
lw \$dst, (\$src1)	Load the word at the address in \$src1 into \$dst
lw \$dst, const(\$src1)	Load the word at the address in \$src1 offset by const bytes into \$dst
sw \$src1, label	Store the value of \$src1 into the address the label refers to
sw \$src1, (\$src2)	Store the value of \$src1 into the address in \$src2
sw \$src1, const(\$src2)	Store the value of \$src1 into the address in \$src2 offset by const bytes

Labels are useful to be able to jump to particular points in the program. The following example skips the 2nd line:

```

        j save_world
        la $s0, destroy_the_world_array
save_world: done

```