Instructions:

add

addi

addu

addui

addc

addcu

addcui

addci

sub

subi

cmp

cmpi

cmpu

cmpui

and

andi

or

xor

not

logsh (logical shift reg, reg)

lshi (left shift immediate)

rshi (right shift immediate)

alogsh (arithmetic logical shift reg, reg)

arshi (arithmetic right shift immediate)

alshi (arithmetic left shift immediate)

wait

mov

movi

load

store

jal (jal label. Automatically adds 6 commands that make the address of label. Uses r14 and r15)

return

jump

jg

jl

je

jle

jge

jne

start

get

encheck

How to syntactically format input to the assembler/compiler:

Rtype:

Command r0-15, r0-15 All registers are now referred to in decimal as in 0-15.

Itype:

Command r0-15, immediate All immediate values to be given in decimal.

Jumps:

Type label Put the jump type in and then a label. See below.

Labels:

Goofy: mov r15, r0 This command is labeled as Goofy. A jump command that looks like “jump Goofy” will jump to the command labeled as “Goofy:”

Labels must have a “:” after the name when placing. When referring to them in jumps no “:” is used.

The compiler/assembler asks for a text file and converts it to a hex file for the processor. The created file will be in the same location as the instruction file that is read in. Comments may be made using “//” before them. There are no block comments. Using “//” will cause anything after it on that line to be ignored.