CSCI2121 Assignment #5

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#1. a)

ld r1, MA

ld r2, MB

add r2, r2, r2

add r2, r1, r2

ld r1, MC

sub r2, r2, r1

sub r2, r2, r1

sub r2, r2, r1

sub r2, r2, r1

st r2, MX

b)

lar r0, END

lar r1, JUMP

lar r2, JMP

ld r3, MA

ld r4, MX

brzr r1, r3

brpl r2, r3

addi r4, r4, 1

br r0

addi r4, r4, -1 :JMP

br r0

la r4, 0 :JUMP

br r0

st r4, MX :END

c)

lar r0, START

lar r1, END

la r2, 10

ld r3, MA

ld r4, MB

ld r5, MC

ld r6, MX

brzr r1, r2 :START

add r6, r6, r3

add r6, r6, r4

add r6, r6, r5

add r2, r2, -1

brpl r0, r2

st r6, MX :END

#2. a)

ld r0, MA

ld r1, MB

and r0, r0, r1

not r0, r0

st r0, MX

b)

ld r0, MA

ld r1, MB

or r0, r0, r1

not r0, r0

st r0, MX

c)

ld r0, MA

ld r1, MB

or r2, r0, r1

and r0, r0, r1

not r0, r0

and r0, r0, r2

st r0, MX