Instructions:

Register addressing:

ADD

SUB

MULT

XSR

JUMPR

MOV

PUSH Rd, Rs // data in Rs gets stored in address held by Rd

// cond: specify whether to increment

// increment happens after

POP Rd, Rs // data in Rs gets stored in address held by Rd

// cond: specify whether to decrement Rd (happens before)

// can we implement in 2 cycles?

Direct addressing:

LDI/SET

STA

JUMP

CALL

RTN

STP

DIRECT ADD

\_main:

LDI 0x100

CALL \_soubrout1

\_subrout1:

LDI 0x100

RET \_main

Register Addressing bitfields:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| opcode | cond | CIN | s | Rdestination | Rsource |
| 4 bits | 3 bits | 2 bits | 1 bit | 3 bits | 3 bits |

Cond:

Cond for current instr:

000 exe always  
 001 exe never  
 010 exe if negative  
 011 exe if eq 0

Cond for next instr:

100 exe always  
 101 exe  
 110 exe if negative  
 111 exe if eq 0