Project Programs

Last updated 5/4/21

Project Programs

- Program Expectations

  - Each program is run from a reset condition
    - Registers A,B,C,D are unknown
    - The data memory is unknown
      - You can leave the previous programs value in RAM if you wish

  - Each program runs to completion and all registers/outputs remain stable until a reset is received
    - Note – the output select signal must work even after the completion of the program
    - Accomplish this by keeping the same final instruction (NOP) in the done state

Project Programs

- Program 1 – located at ROM address 0

```
ldi a,0x10
ldi b,0x0a
sub a,b,c
or a,c,d
add b,c,b
and d,b,c
sub d,a,a
nand a,b,c
nor d,c,b
slt c,d
nop
```

Project Programs

- Program 2 – located at ROM address 64

```
ldi a,0x02
ldi b,0x04
ldi c,0x08
ldi d,0x0C
st a,d
st b,c
st d,a
st c,b
ld a,a
ld b,b
ld c,c
ld d,d
nop
```

Project Programs

- Program 3 – located at ROM address 160

    Write your own program to calculate the sum of numbers from 1 to 7. You must add all 7 numbers together.

    Challenge: see if you can do this with a single LDI command