

DIN contains the code for the instruction:

-The FSM must control the process:

*Bringing DIN into IR

*Looks at the IR & figures out what control signals to set & when to set them to "execute" the instructions

-The mv & mvt can be executed in 2 cycles

-The add & sub take 4 cycles.

-The first cycle only copies DIN into IR

IR_{in}=1, every other enable=0

	T ₀	T ₁	T ₂	T ₃
mv	IR _{in}	Select = rY or IR, rX _{in} , Done		
mvt	IR _{in}	Select = IR, rX _{in} , Done		
add	IR _{in}	Select = rX, A _{in}	Select = rY or IR, G _{in}	Select = G, rX _{in} , Done
sub	IR _{in}	Select = rX, A _{in}	Select = rY or IR, AddSub, G _{in}	Select = G, rX _{in} , Done

mv rX.Op2

Table 2: Control signals asserted in each instruction/time step.