Project 5 Instruction Decoder Solution

NOP
LD #9
ST 5
LD #8
ST 7
LD 5
LD 7

clock        clock          = clock
resetb      resetb        = resetb
CPC          CPC (Clock for Program Counter) = clock
RPC          RPC (Reset for Program Counter) = resetb
T            T (instruction clock) <= clock/2
iadr         iadr (instruction/program address)
idat         idat (instruction op-code and operand)
RIR          RIR (Reset for Instruction Register) = (resetb)'
WIR          WIR (Write signal for Instruction Register) = clock' * T'
IRO          IRO (Instruction Register Output)
SDM          SDM (Select Data Register Mux) = AMOD
WDR          WDR (Write signal for Data Register) = clock' * T * LD
DOE          DOE (Data register Output buffer Enable) = T * ST
mdat         Mdat (Memory data bus)
rw           rw (read/writeb) = (clock' * T * ST)'
asb          asb (Address Strobe) = (T * (LD + ST))'