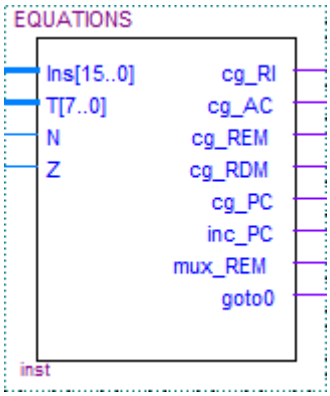
Report

Name: EQUATIONS

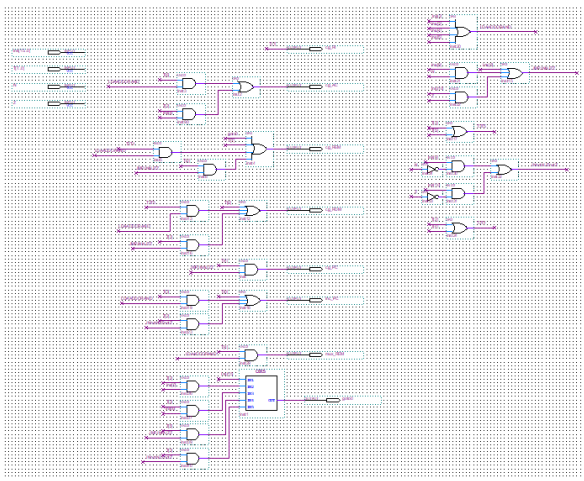
Description: it's a circuit based on these equations:

- cg_RI = T[1]
- cg_AC = T[6]·(LDA + ADD + OR + AND) + T[2]·NOT
- cg_REM = (T[2] + T[4])·(LDA + ADD + OR + AND) + T[2]·(JMP + JN·N + JZ·Z) + T[7] + goto0
- cg_RDM = T[0] + (T[3] + T[5])·(LDA + ADD + OR + AND) + T[3]·(JMP + JN·N + JZ·Z)
- cg_PC = T[4]·(JMP + JN·N + JZ·Z)
- inc_PC = T[0] + T[3]·(LDA + ADD + OR + AND) + T[2]·(JN·$\overline{N}$ + JZ·$\overline{Z}$)
- mux_REM = T[4]·(LDA + ADD + OR + AND)
- goto0 = T[2]·NOP + T[3]·NOT + T[5]·(JMP + JN·N + JZ·Z) + T[3] ·(JN·$\overline{N}$ + JZ·$\overline{Z}$) + HLT

Symbol:

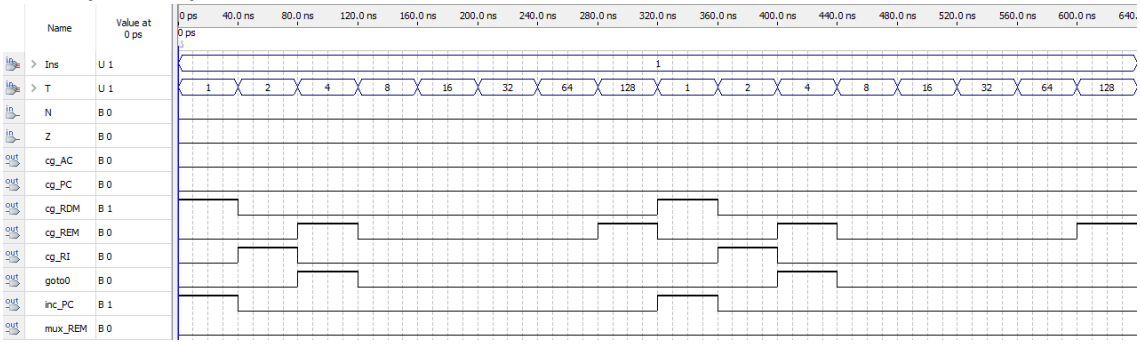


Circuit:

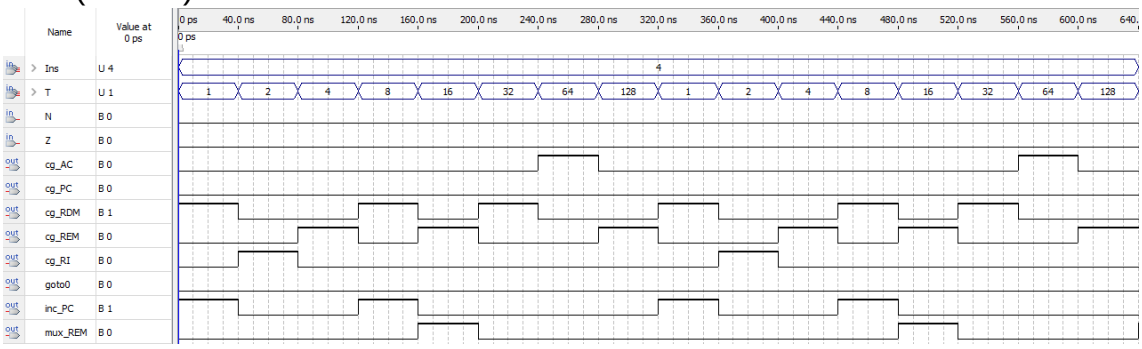


Simulation:

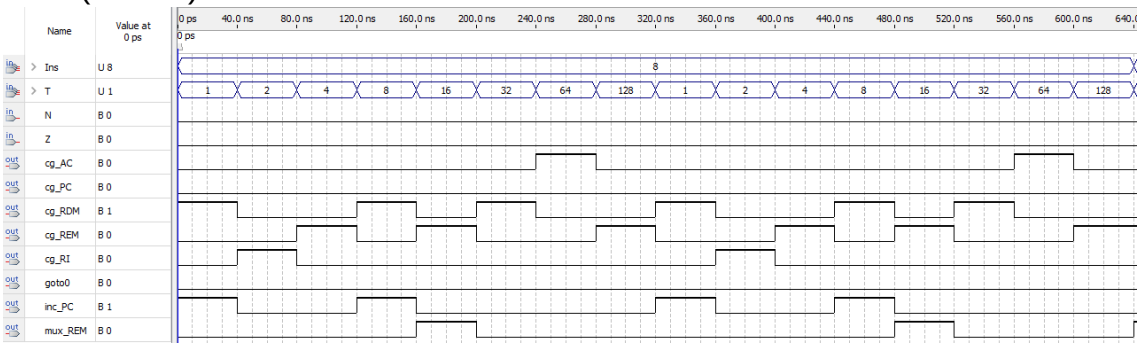
- NOP (Ins = 1):



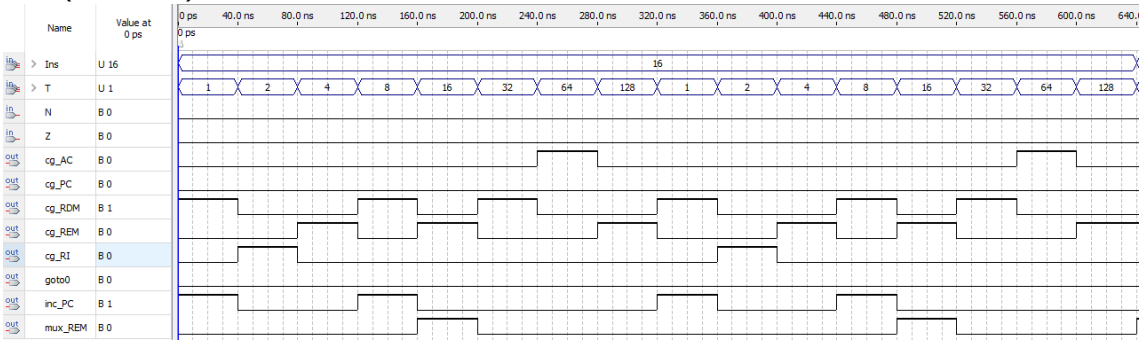
- LDA (Ins = 4):



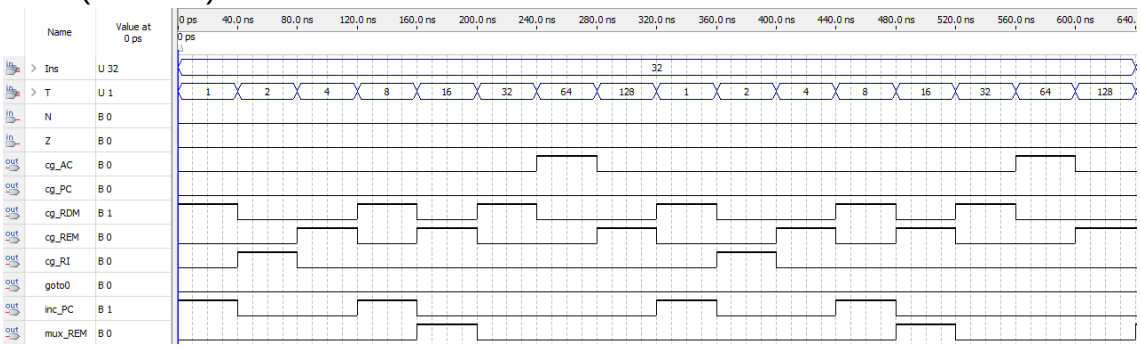
- ADD (Ins = 8):



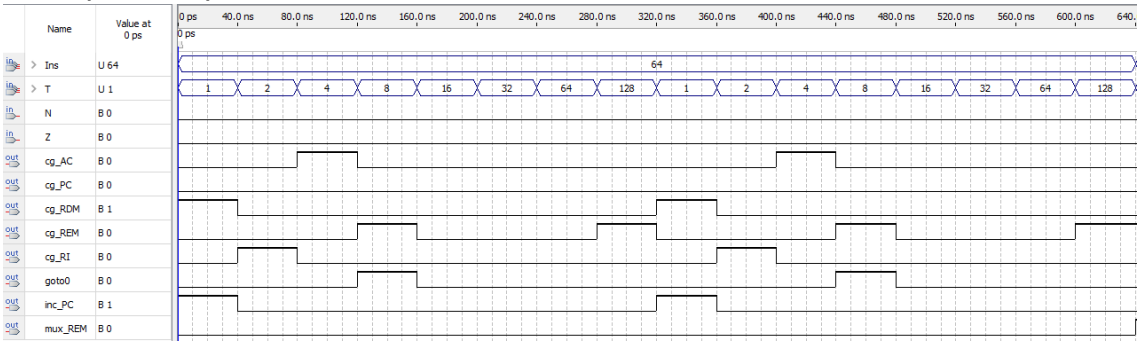
- OR (Ins = 16):



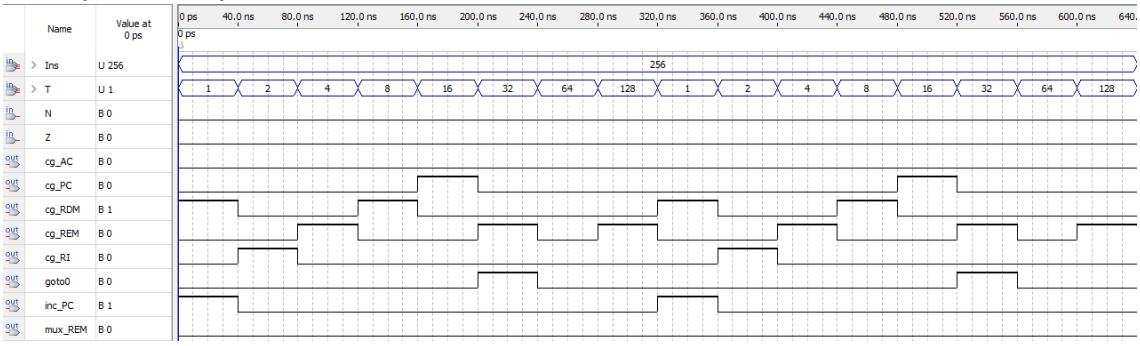
- AND (Ins = 32):



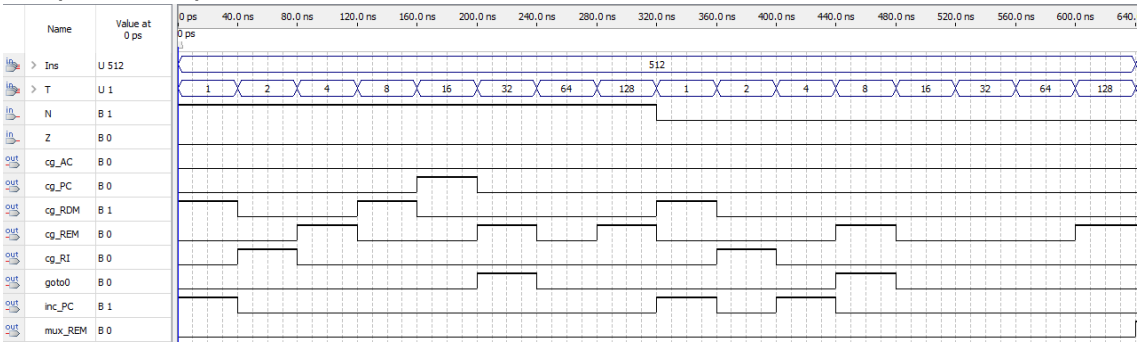
- NOT (Ins = 64):



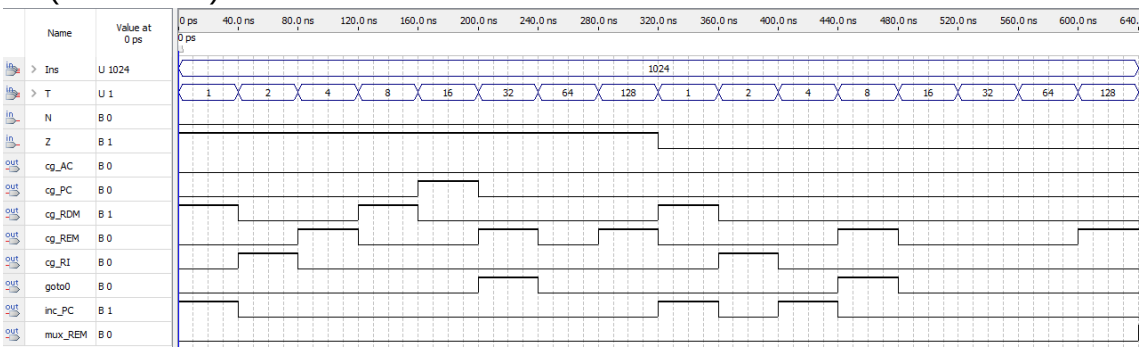
- JMP (Ins = 256):



- JN (Ins = 512):



- JZ (Ins = 1024):



- HLT (Ins = 32768):