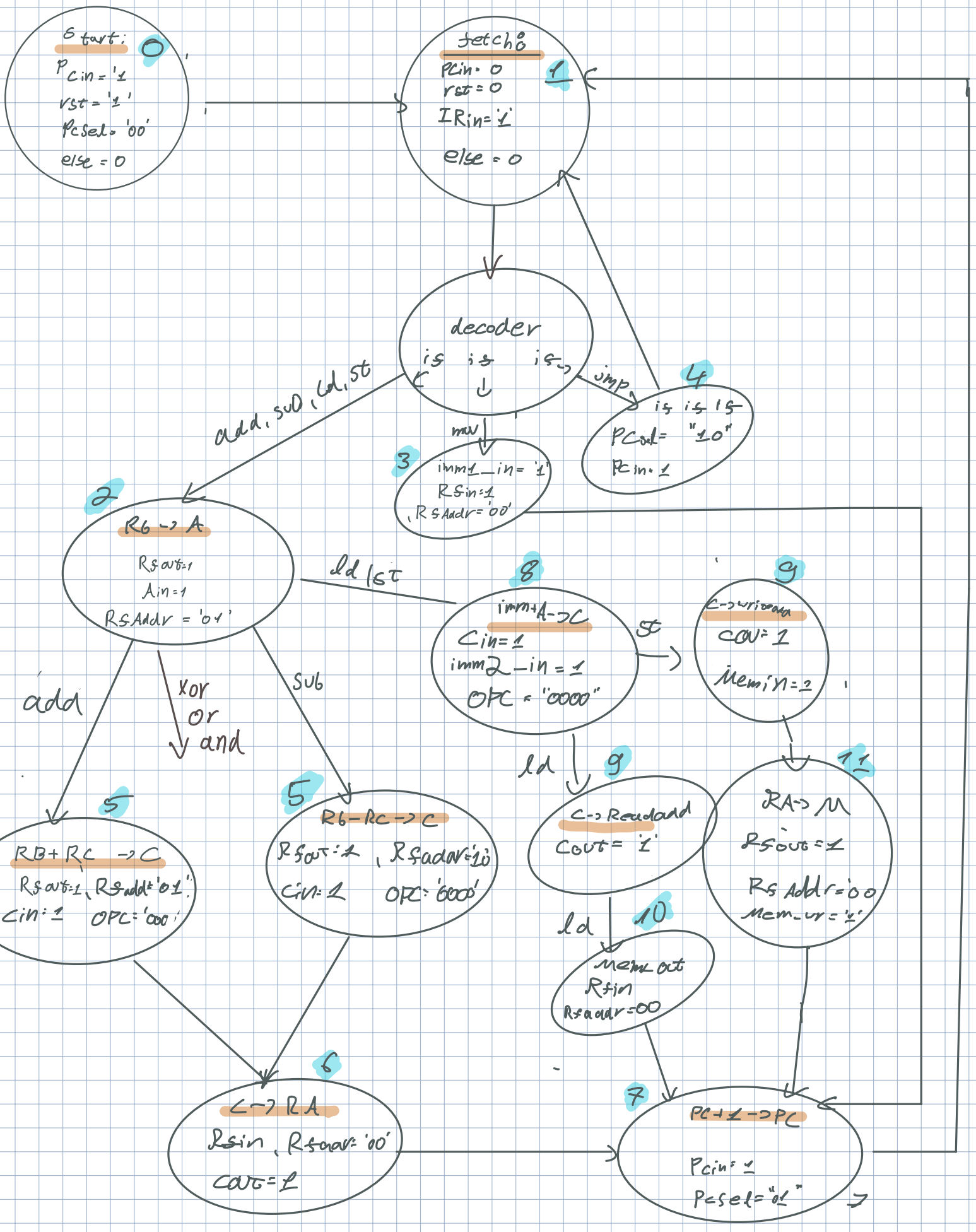
Start: 0
Pcin = '1'
rst = '1'
PCsel = '00'
else = 0
fetch 1
Pcin = 0
rst = 0
IRin = '1'
else = 0
decoder
is
is
is
add, sub, ld, st
mov
jmp
4
is is is
PCsel = "10"
PCin = 1
3
imm1_in = '1'
RSin = 1
RSAddr = '00'
2
R6 -> A
RSout = 1
Ain = 1
RSAddr = '01'
ld / st
8
imm+A->C
Cin = 1
imm2_in = 1
OPC = "0000"
st
9
C->uricontrol
COV = 1
Memin = 1
add
xor
or
and
sub
5
RB+RC -> C
RSout = 1, RSaddr = '01'
Cin = 1 OPC = '000'
5
R6-RC->C
RSout = 1, RSadar = '10'
Cin = 1 OPC = '0000'
ld
g
C->Readadd
Cout = '1'
11
RA -> M
RSout = 1
RS Addr = '00'
Mem_wr = '1'
ld
10
mem out
Rfin
Rfaddr = 00
6
C -> RA
RSin, RFaar = '00'
Cout = 1
7
PC+1->PC
Pcin = 1
Pcsel = "01"

פקודות אריתמטיות (sub, add, xor, or, and)

נשתמש בקו בקרה OPC ל- ALU לבחירה:

Add

RB → A	RSout=1, Ain=1, RSAddr='01'
RB+RC → C	RSout=1, Ain=0, RSAddr='10', Cin=1, OPC='0000'
C → R_A	RSin=1, RSAddr='00', Cout=1
PC+1 → PC	PCin=1, PCSel="01"

Sub

RB → A	RSout=1, Ain=1, RSAddr='01'
RB−RC → C	RSout=1, Ain=0, RSAddr='10', Cin=1, OPC='0001'
C → R_A	RSin=1, RSAddr='00', Cout=1
PC+1 → PC	PCin=1, PCSel="01"

פקודות קפיצות: jmp, jc, jnc

	Cheking C flag
PC+1+offset	PCsel="10" PCin=1

פקודת move:

imm → R[A]	imm1_in='1', RSin=1, RSAddr='00'
PC=PC+1	

load

$R_b \rightarrow A$	Rsout=1 Ain=1 RSAddr = '01'
imm + A → C	Cin , imm2_in, OPC = "0000"
C → Readaddr [M]	Cout = 0
M[C] → Ra	Mem_out , RSin , RsAddr = '00',
PC = PC + 1	

store

$R_b \rightarrow A$	Rsout=1 Ain=1 RSAddr = '01'
imm + A → C	Cin , imm2_in, OPC = "0000"
RA → DSS	cin=0 RSout , RSsaddr = '00'
C → Writeaddr	Cout = 1
SS → data in	Mem_in = 1
PC = PC + 1	Mem_out , RSin , RsAddr = 00',