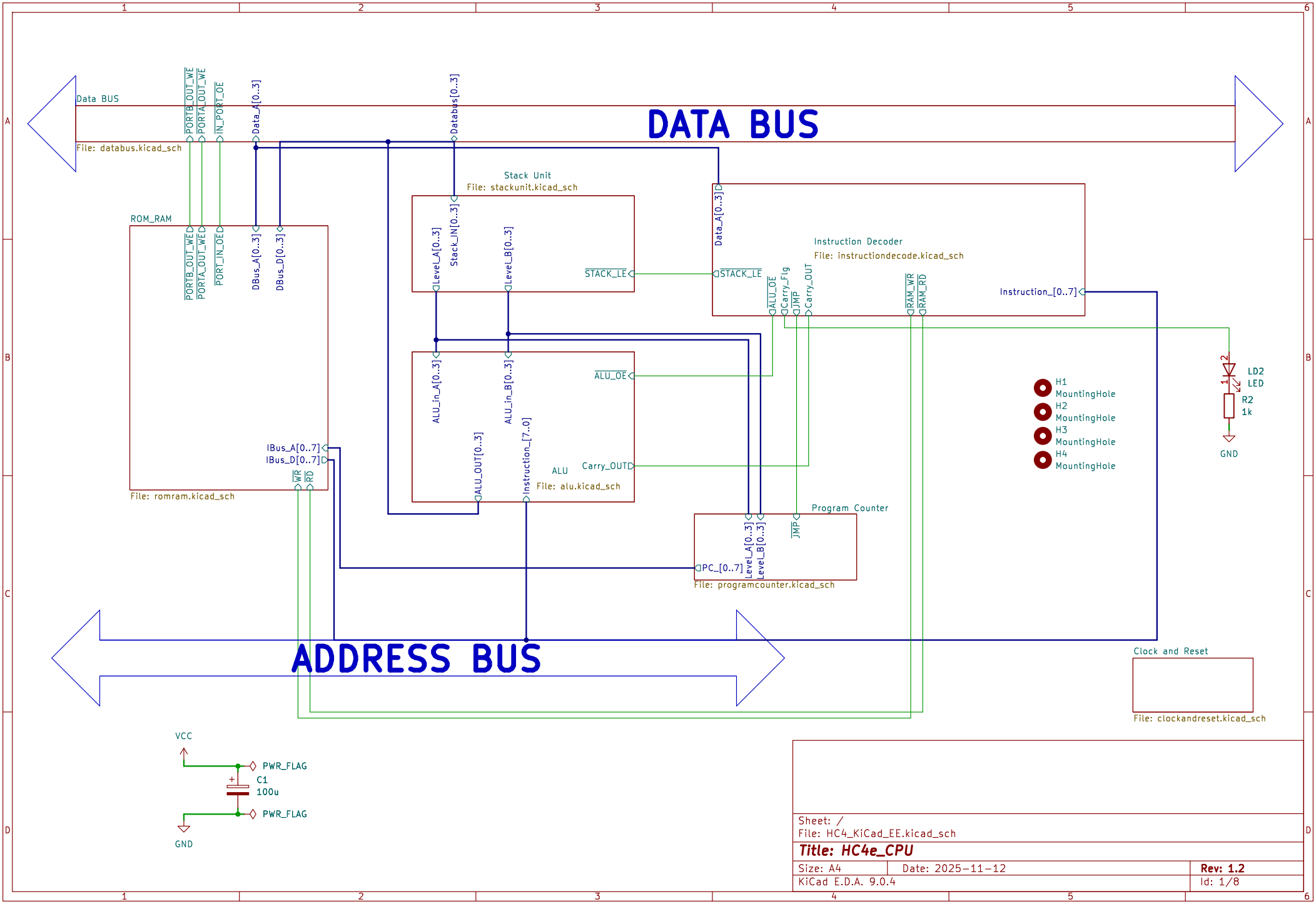
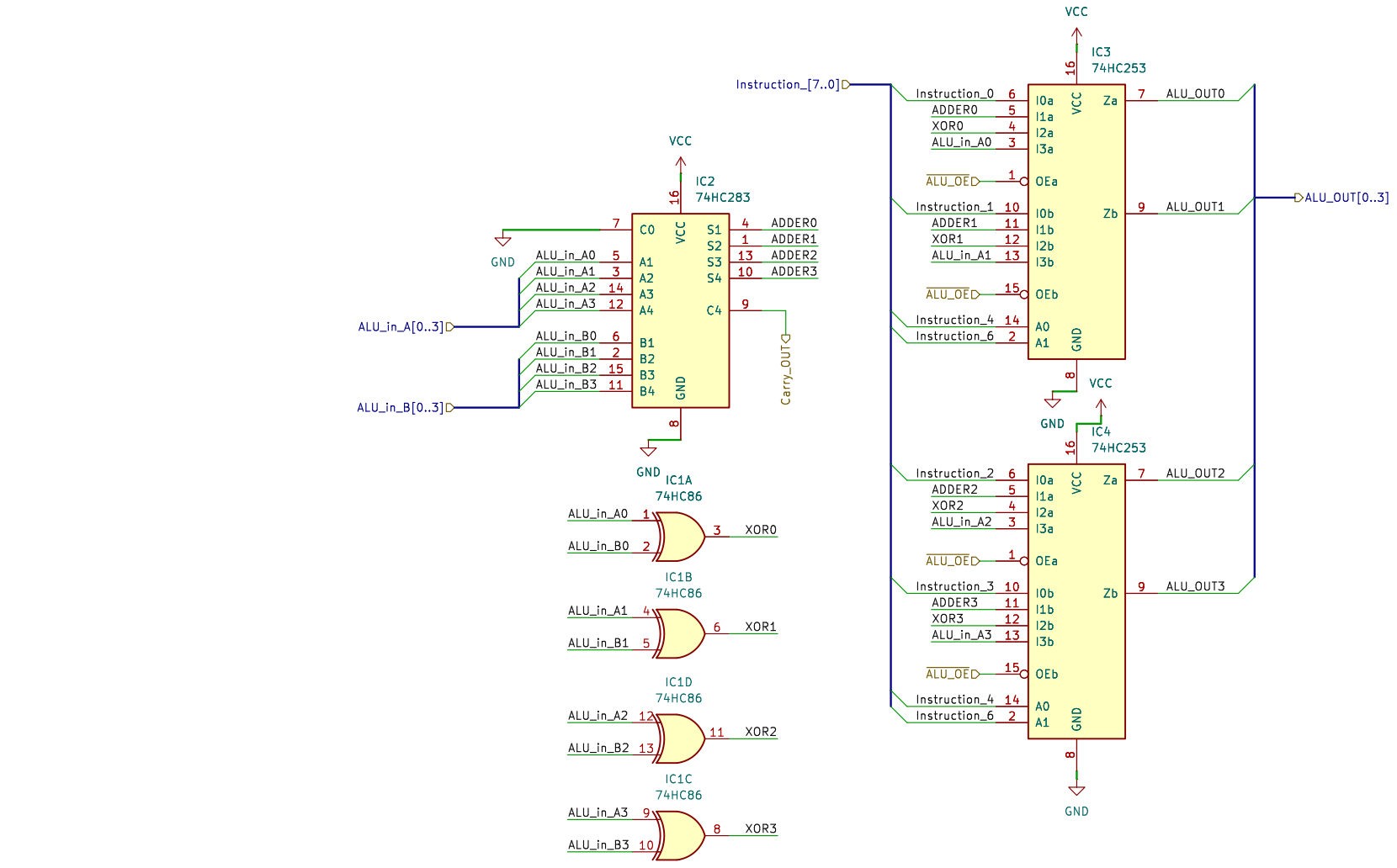
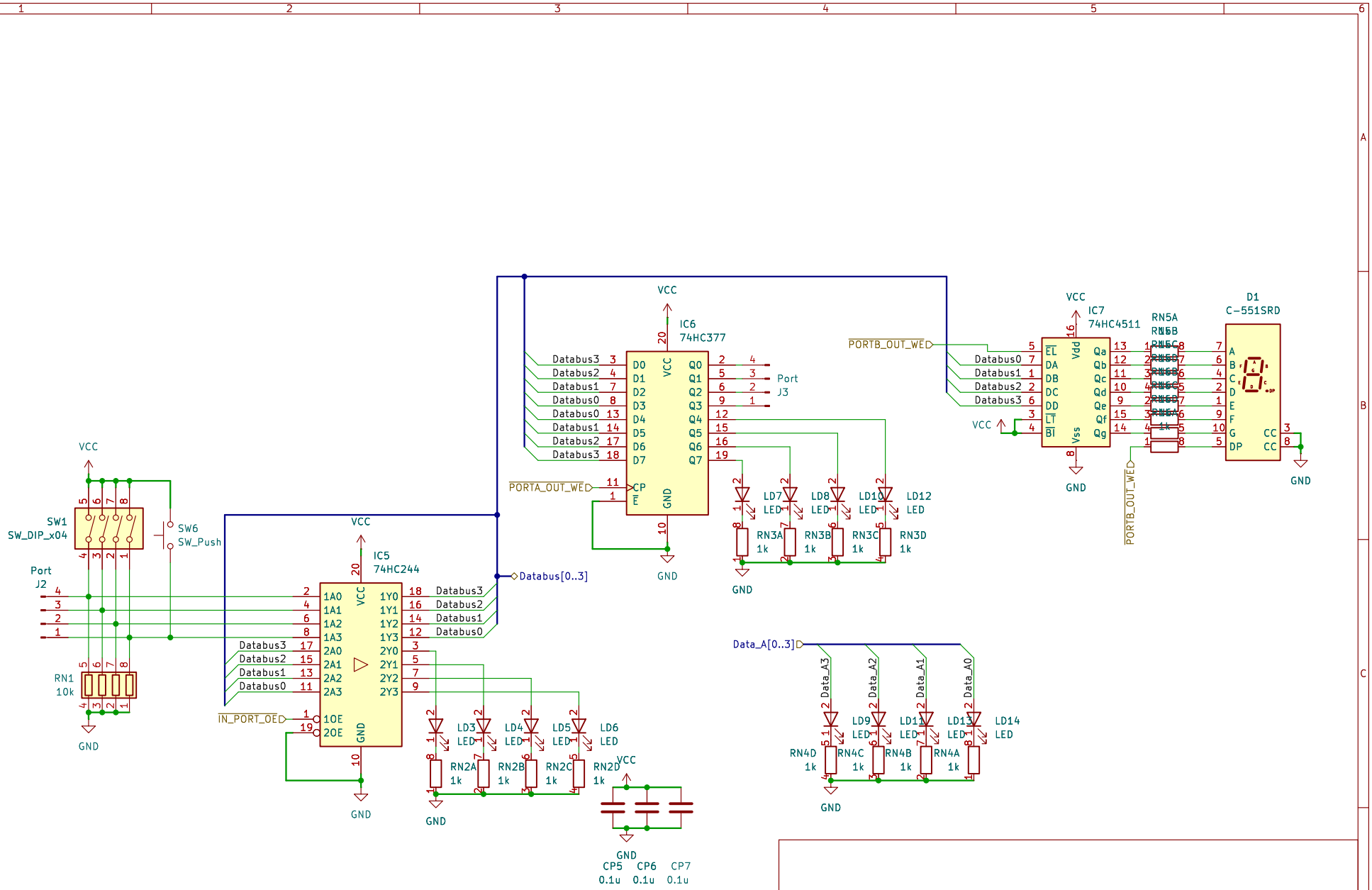

DATA BUS
Data BUS
File: databus.kicad_sch
PORTB_OUT_WE
PORTA_OUT_WE
IN_PORT_OE
Data_A[0..3]
Databus[0..3]
Stack Unit
File: stackunit.kicad_sch
Stack_IN[0..3]
LevelA[0..3]
LevelB[0..3]
STACK_LE
ROM_RAM
PORTB_OUT_WE
PORTA_OUT_WE
PORT_IN_OE
DBus_A[0..3]
DBus_D[0..3]
Instruction Decoder
File: instructiondecode.kicad_sch
Data_A[0..3]
STACK_LE
ALU_OE
Carry_Flg
JMP
Carry_OUT
RAM_WR
RAM_RD
Instruction_[0..7]
ALU_in_A[0..3]
ALU_in_B[0..3]
ALU_OE
ALU_OUT[0..3]
Instruction_[7..0]
Carry_OUT
ALU
File: alu.kicad_sch
IBus_A[0..7]
IBus_D[0..7]
WR
RD
File: romram.kicad_sch
Program Counter
JMP
LevelA[0..3]
LevelB[0..3]
PC_[0..7]
File: programcounter.kicad_sch
H1
MountingHole
H2
MountingHole
H3
MountingHole
H4
MountingHole
LD2
LED
R2
1k
GND
ADDRESS BUS
Clock and Reset
File: clockandreset.kicad_sch
VCC
PWR_FLAG
C1
100u
PWR_FLAG
GND
Sheet: /
File: HC4_KiCad_EE.kicad_sch
Title: HC4e_CPU
Size: A4
Date: 2025-11-12
Rev: 1.2
KiCad E.D.A. 9.0.4
Id: 1/8



Sheet: /ALU/
File: alu.kicad_sch

Title: HC4e_CPU

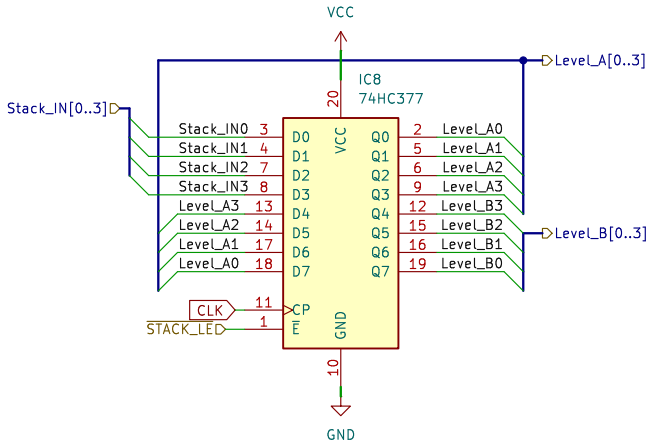
Size: A4	Date: 2025-11-12	**Rev: 1.2**
KiCad E.D.A. 9.0.4		Id: 2/8

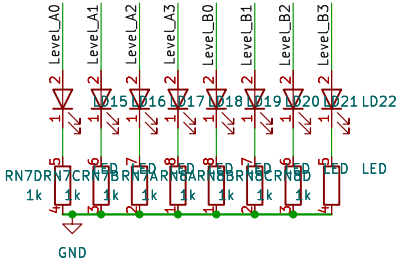


Sheet: /Data BUS/
File: databus.kicad_sch

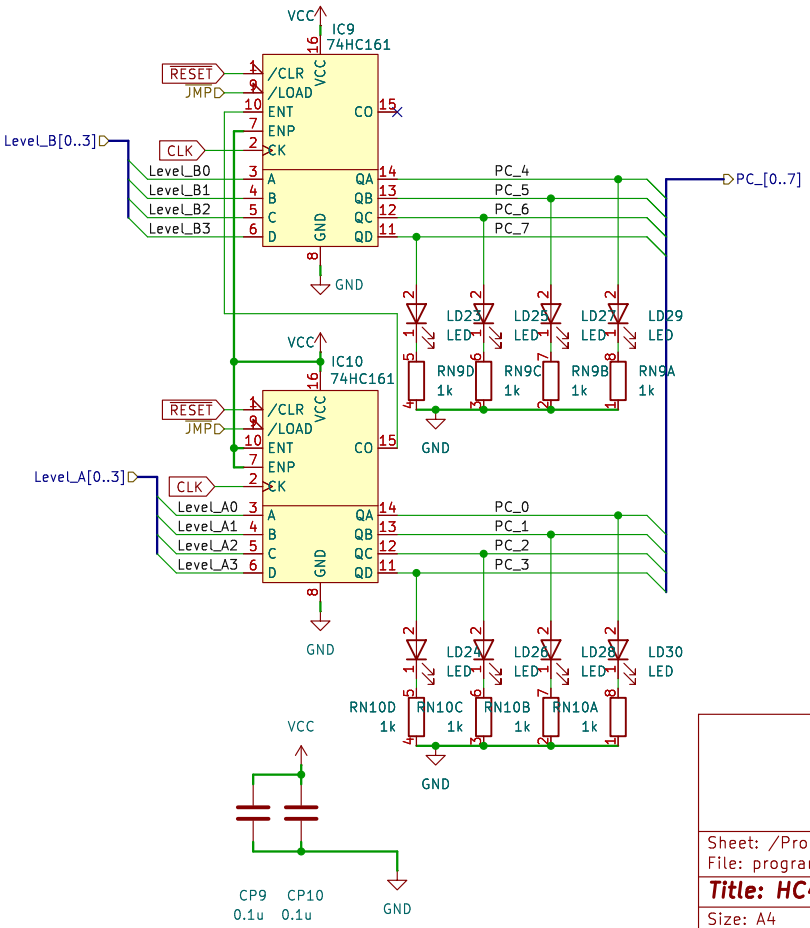
Title: HC4e_CPU

Size: A4	Date: 2025-11-12	**Rev: 1.2**
KiCad E.D.A. 9.0.4		Id: 3/8





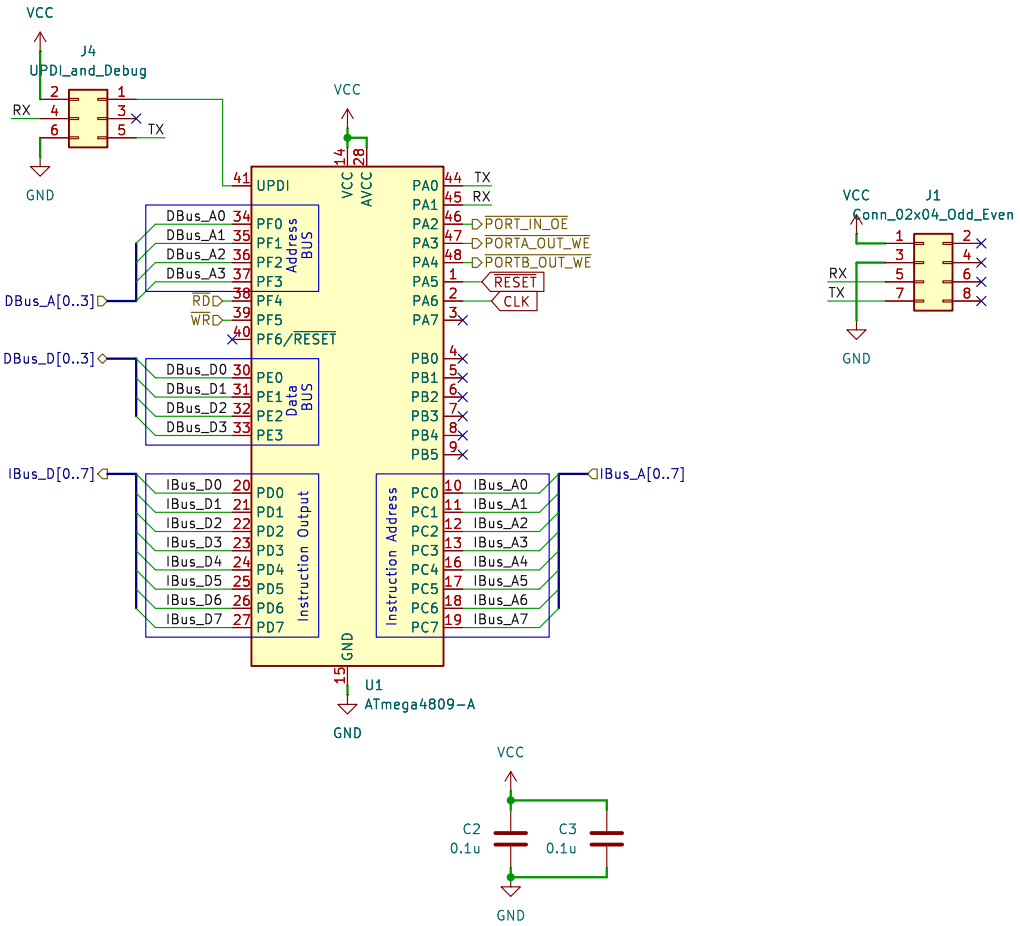
Sheet: /Stack Unit/		
File: stackunit.kicad_sch		
Title: HC4e_CPU		
Size: A4	Date: 2025-11-12	**Rev: 1.2**
KiCad E.D.A. 9.0.4		Id: 4/8



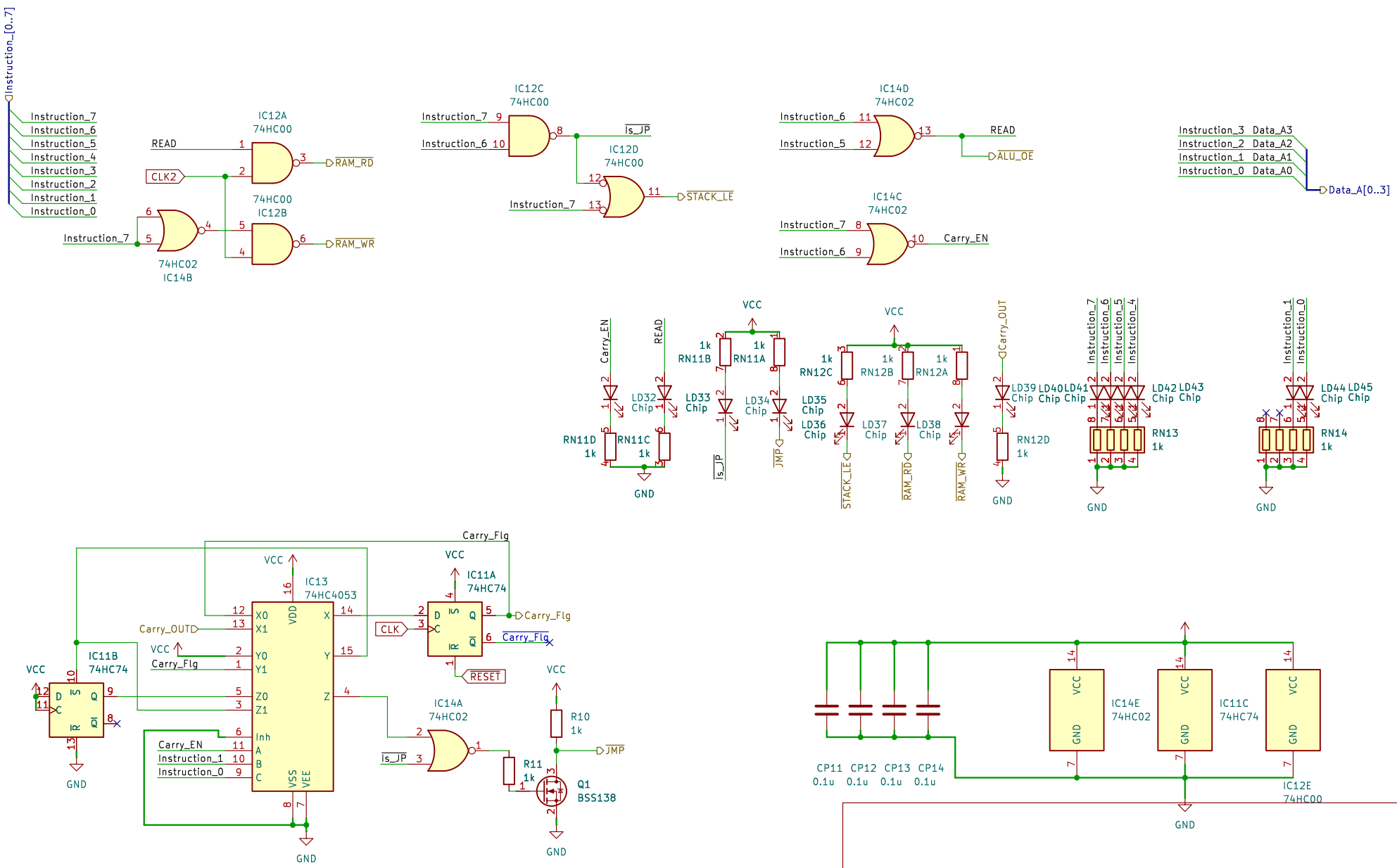
Sheet: /Program Counter/
File: programcounter.kicad_sch

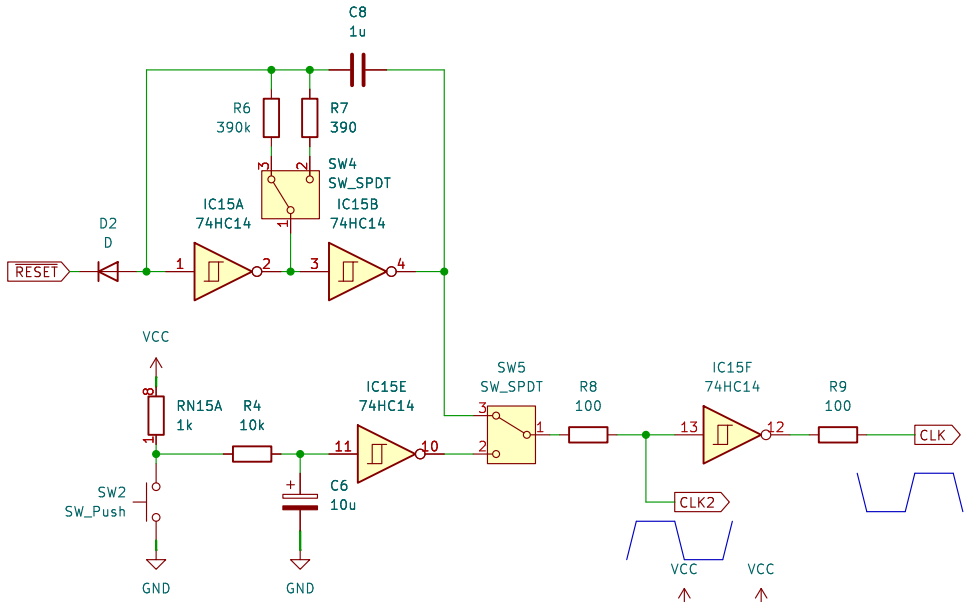
Title: HC4e_CPU

Size: A4	Date: 2025-11-12	**Rev: 1.2**
KiCad E.D.A. 9.0.4		Id: 5/8



Sheet: /ROM_RAM/		
File: romram.kicad_sch		
Title: HC4e_CPU		
Size: A4	Date: 2025-11-12	**Rev: 1.2**
KiCad E.D.A. 9.0.4		Id: 6/8


Instruction_[0..7]
Instruction_7
Instruction_6
Instruction_5
Instruction_4
Instruction_3
Instruction_2
Instruction_1
Instruction_0
IC12A
74HC00
READ
CLK2
RAM_RD
RAM_WR
74HC00
IC12B
Instruction_7
74HC02
IC14B
IC12C
74HC00
Instruction_7
Instruction_6
Is_JP
IC12D
74HC00
STACK_LE
IC14D
74HC02
Instruction_6
Instruction_5
READ
ALU_OE
IC14C
74HC02
Instruction_7
Instruction_6
Carry_EN
Instruction_3 Data_A3
Instruction_2 Data_A2
Instruction_1 Data_A1
Instruction_0 Data_A0
Data_A[0..3]
Carry_EN
READ
RN11D
1k
RN11C
1k
GND
LD32
Chip
LD33
Chip
LD34
Chip
VCC
RN11B
1k
RN11A
1k
Is_JP
JMP
LD35
Chip
LD36
Chip
LD37
Chip
LD38
Chip
RN12C
1k
RN12B
1k
RN12A
1k
STACK_LE
RAM_RD
RAM_WR
Carry_OUT
LD39
Chip
RN12D
1k
GND
Instruction_7
Instruction_6
Instruction_5
Instruction_4
LD40
Chip
LD41
Chip
LD42
Chip
LD43
Chip
RN13
1k
GND
Instruction_1
Instruction_0
LD44
Chip
LD45
Chip
RN14
1k
GND
Carry_Flg
VCC
IC13
74HC4053
Carry_OUT
Carry_Flg
Carry_EN
Instruction_1
Instruction_0
GND
IC11B
74HC74
VCC
GND
IC11A
74HC74
CLK
Carry_Flg
Carry_Flg
RESET
IC14A
74HC02
Is_JP
R10
1k
R11
1k
Q1
BSS138
JMP
GND
CP11 CP12 CP13 CP14
0.1u 0.1u 0.1u 0.1u
IC14E
74HC02
IC11C
74HC74
IC12E
74HC00
GND
Sheet: /Instruction Decoder/
File: instructiondecode.kicad_sch
Title: HC4e_CPU
Size: A4
Date: 2025-11-12
Rev: 1.2
KiCad E.D.A. 9.0.4
Id: 7/8



Sheet: /Clock and Reset/
File: clockandreset.kicad_sch

Title: HC4e_CPU

Size: A4	Date: 2025-11-12	**Rev: 1.2**
KiCad E.D.A. 9.0.4		Id: 8/8