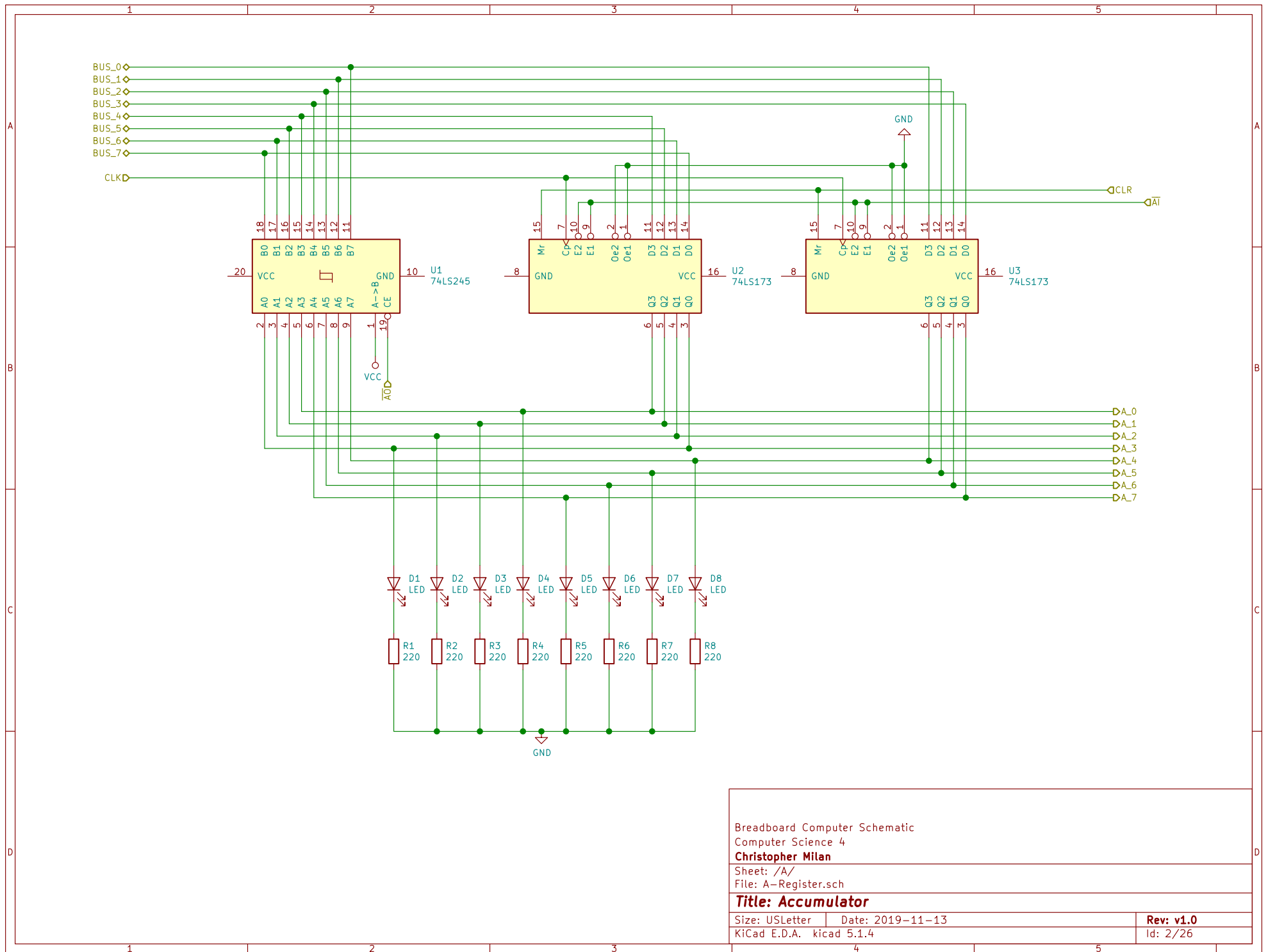


Breadboard Computer Schematic
Computer Science 4
Christopher Milan
Sheet: /
File: breadboard-computer.sch

Title: High Level Overview

Size: USLetter Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
Id: 1/26



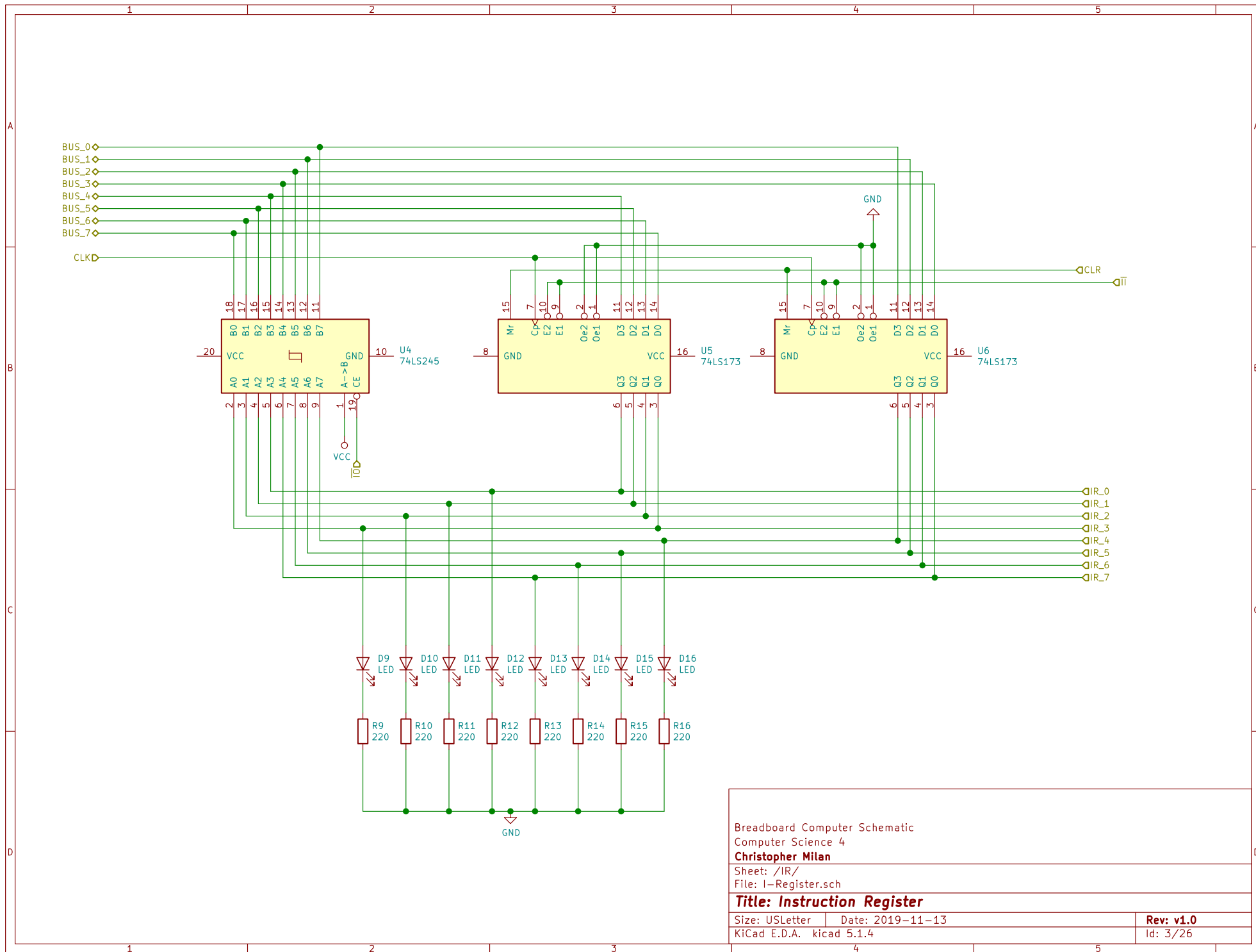
Breadboard Computer Schematic
Computer Science 4
Christopher Milan

Sheet: /A/
File: A-Register.sch

Title: Accumulator

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. | kicad 5.1.4

Rev: v1.0
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Breadboard Computer Schematic
Computer Science 4

Christopher Milan

Sheet: //IR//

File: I-Register.sch

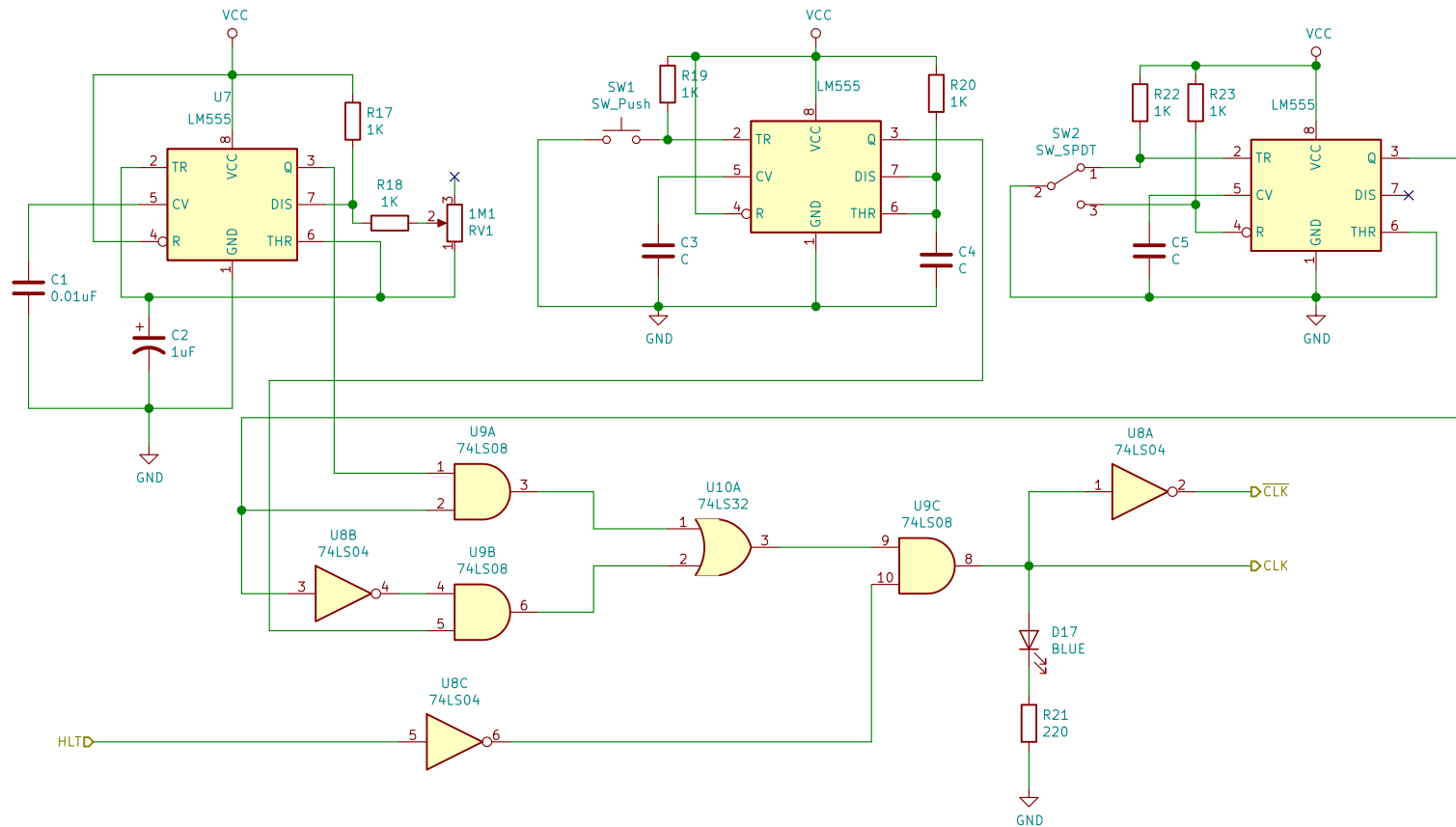
Title: Instruction Register

Size: USLetter Date: 2019-11-13

KiCad E.D.A. kicad 5.1.4

Rev: v1.0

Id: 3/26



Breadboard Computer Schematic
Computer Science 4

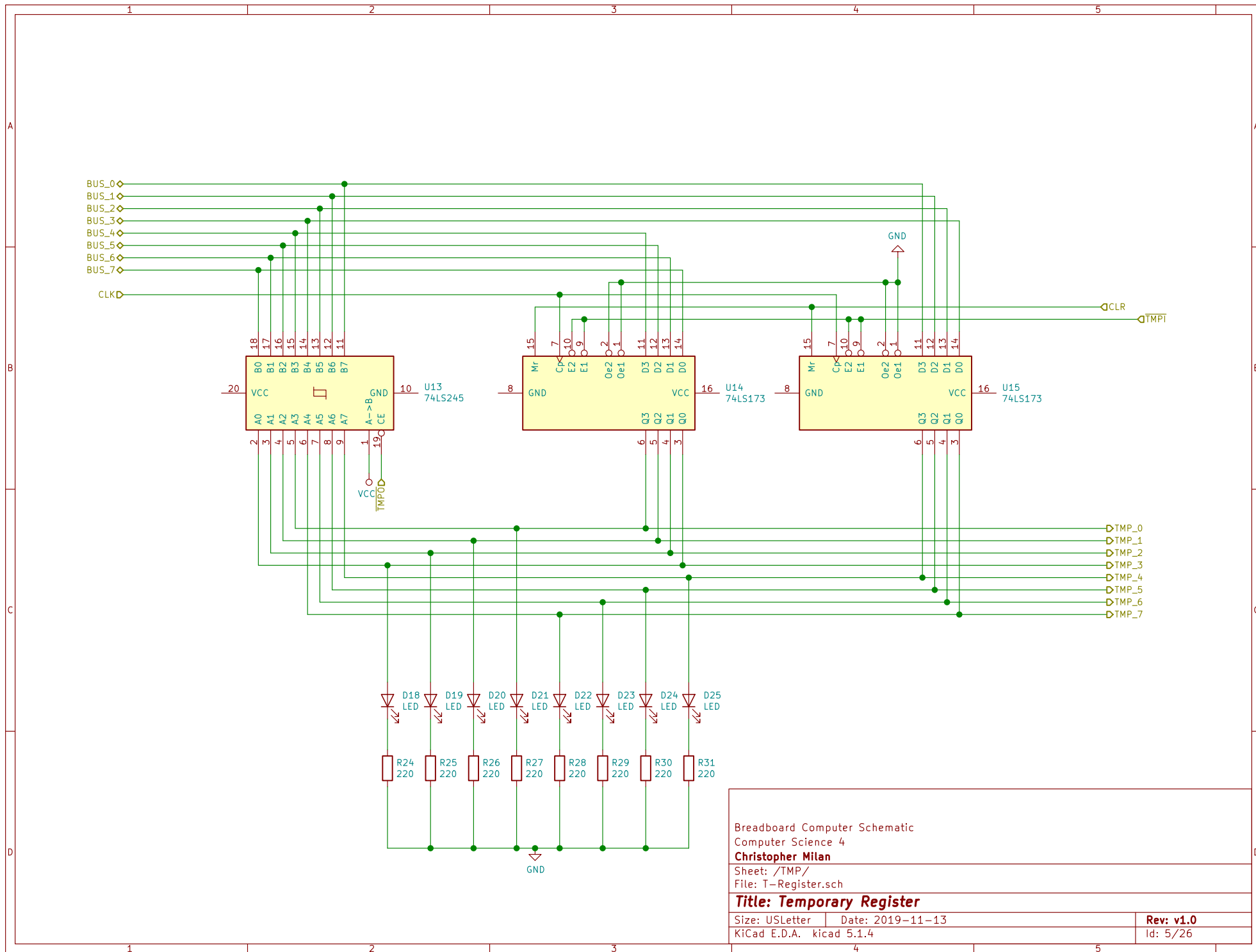
Christopher Milan

Sheet: /Clock/
File: clock.sch

Title: Clock

Size: USLetter Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
Id: 4/26

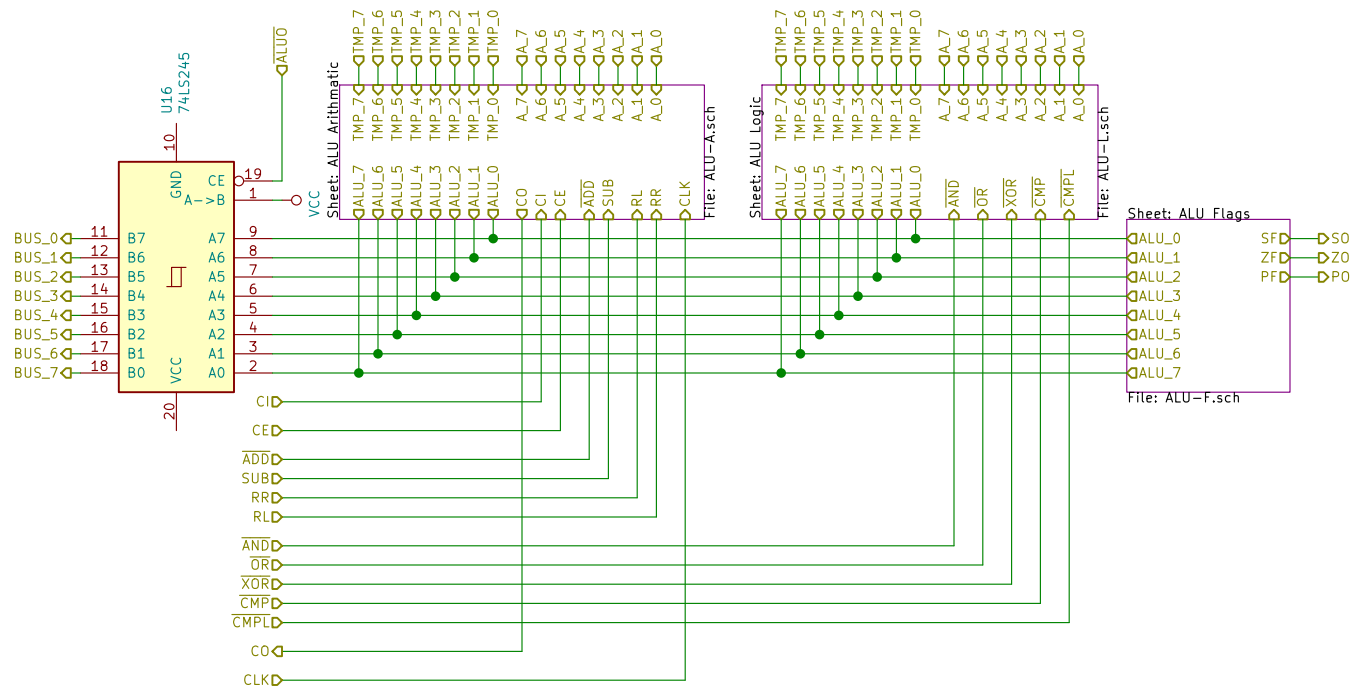


Breadboard Computer Schematic
Computer Science 4
Christopher Milan
Sheet: /TMP/
File: T-Register.sch

Title: Temporary Register

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

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Breadboard Computer Schematic
Computer Science 4

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Sheet: /ALU/

File: ALU.sch

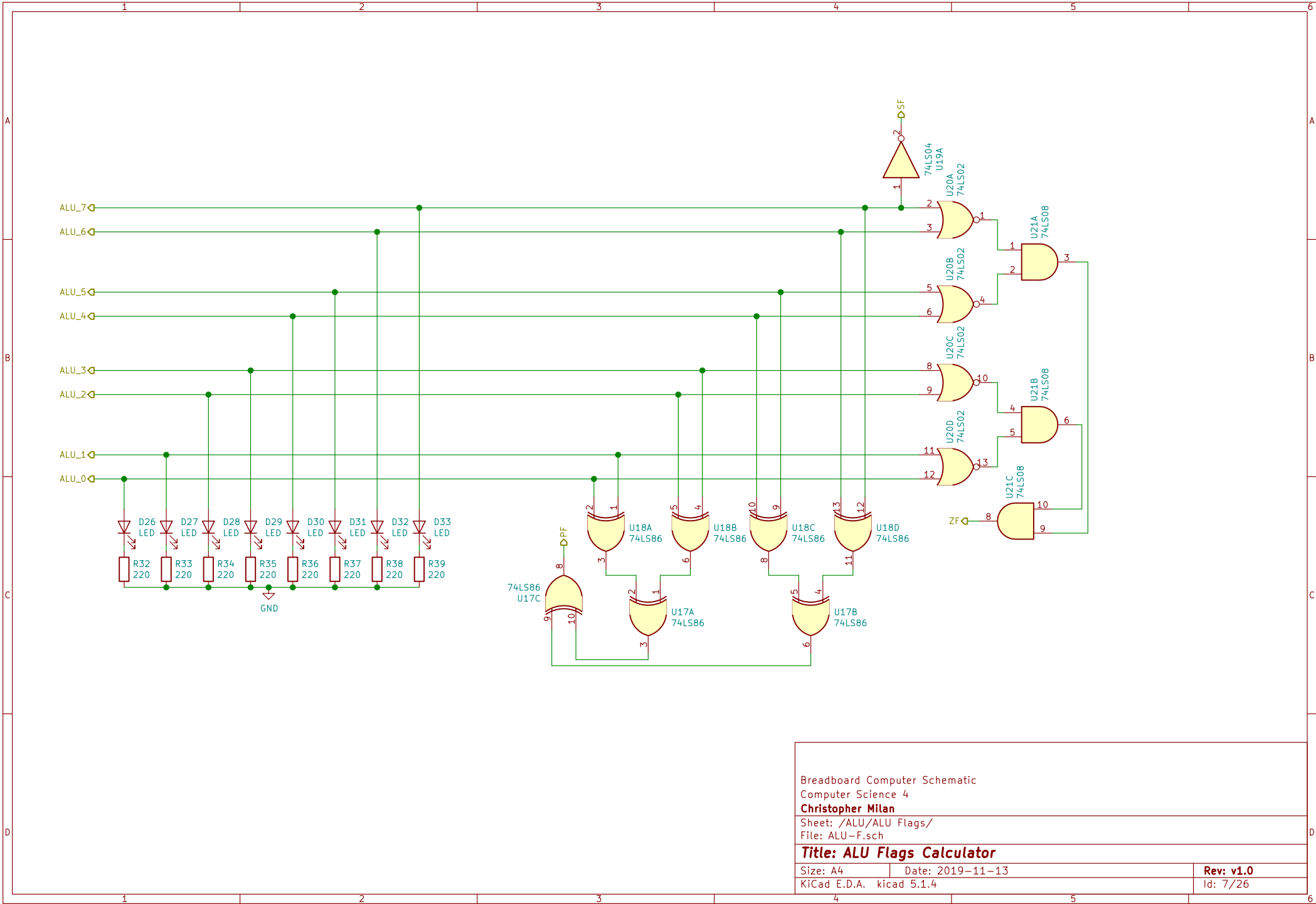
Title: Arithmetic Logic Unit

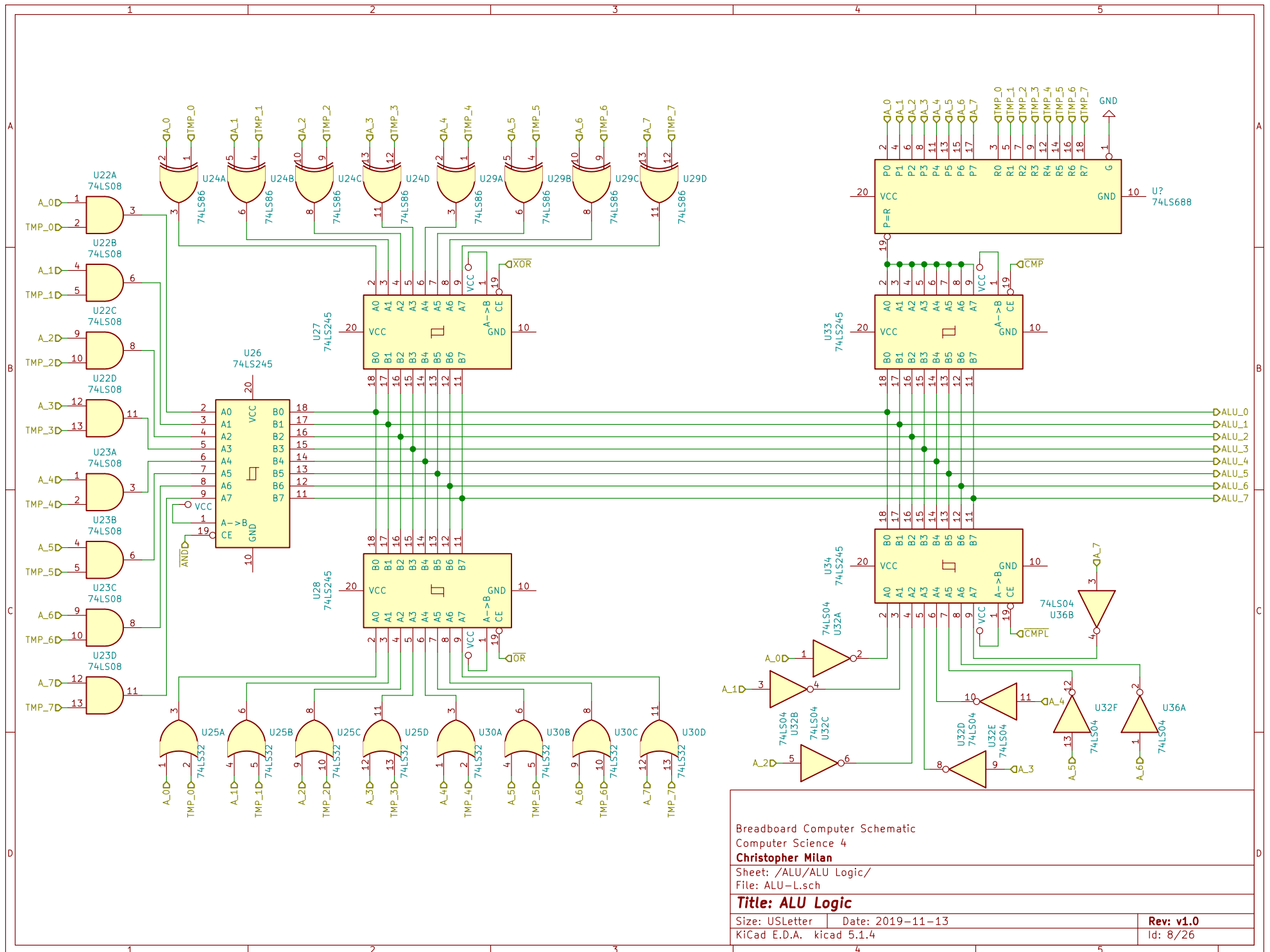
Size: USLetter Date: 2019-11-13

KiCad E.D.A. kicad 5.1.4

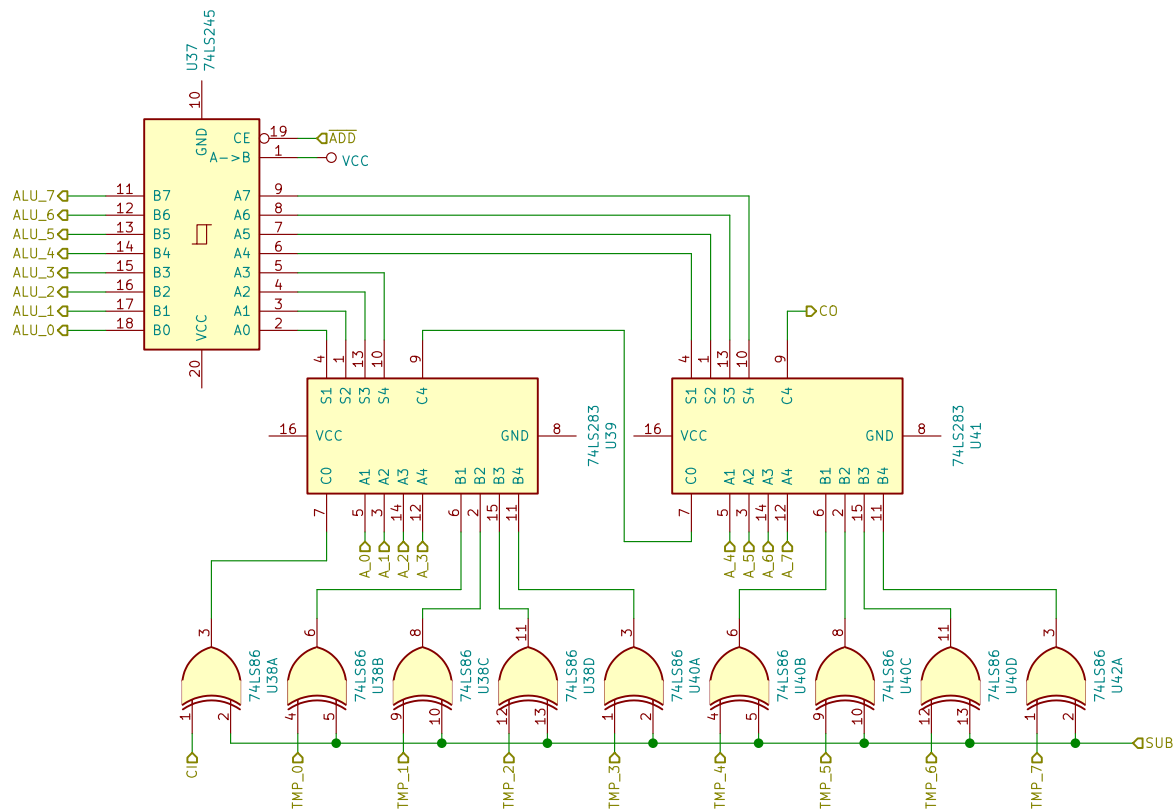
Rev: v1.0

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Rev: v1.0
Id: 9/26



Breadboard Computer Schematic
Computer Science 4

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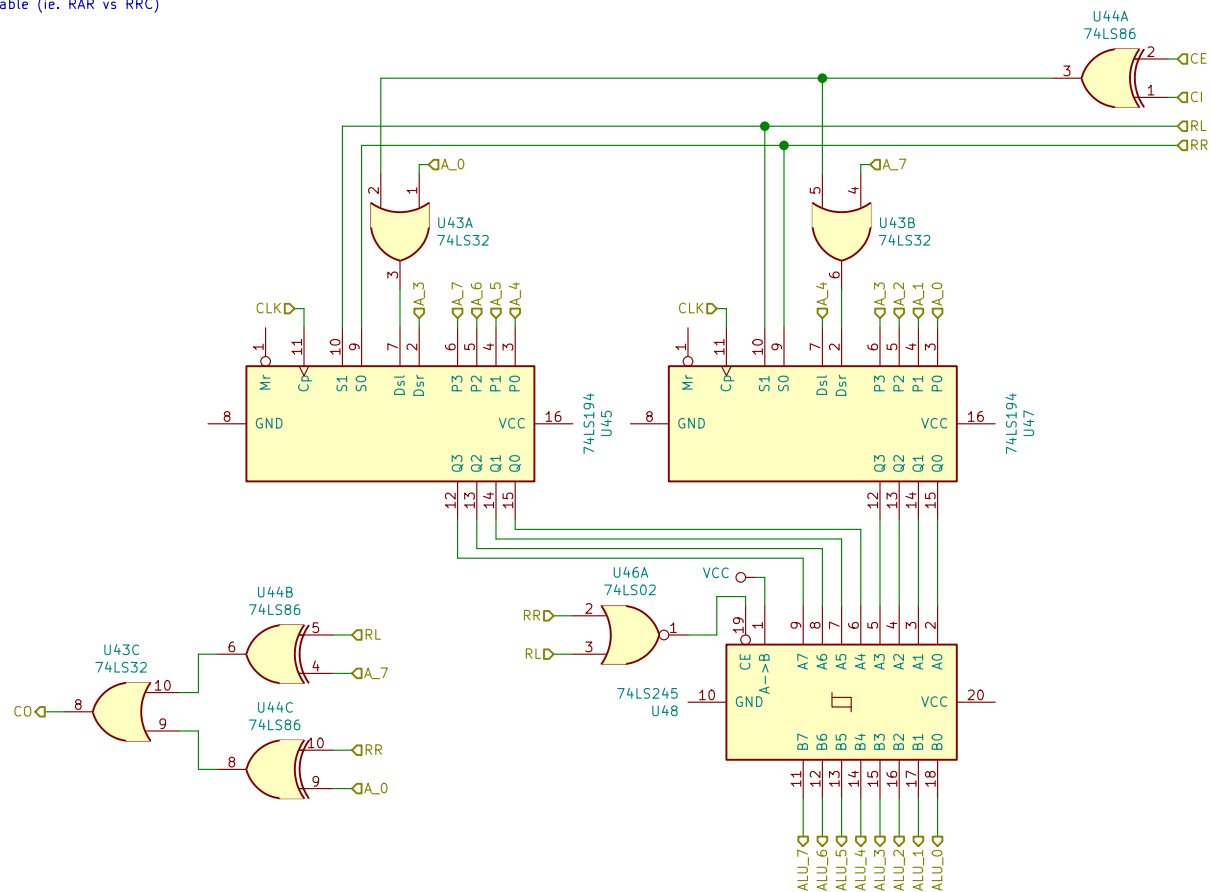
Sheet: /ALU/ALU Arithmetic/ALU Adder/Subtractor/
File: ALU-Add.sch

Title: ALU Adder/Subtractor

Size: USLetter Date: 2019-11-13
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CI - Carry Flag In
CO - Carry Flag Out
CE - Carry Enable (ie. RAR vs RRC)



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Computer Science 4

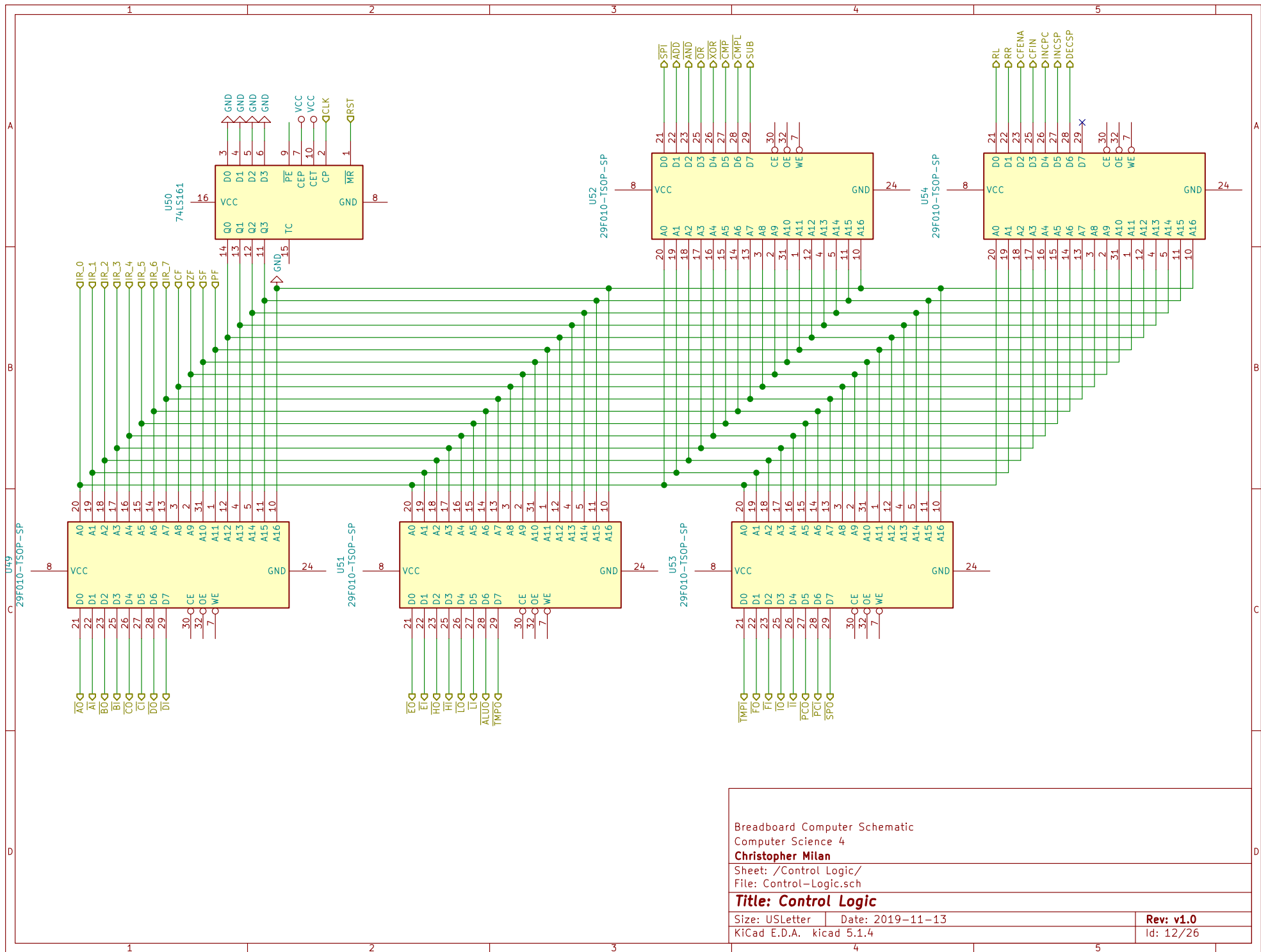
Christopher Milan

Sheet: /ALU/ALU Arithmetic/ALU Shifter/
File: ALU-Shift.sch

Title: ALU Shifter

Size: USLetter Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
Id: 11/26



Breadboard Computer Schematic
Computer Science 4

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Sheet: /Control Logic/
File: Control-Logic.sch

Title: Control Logic

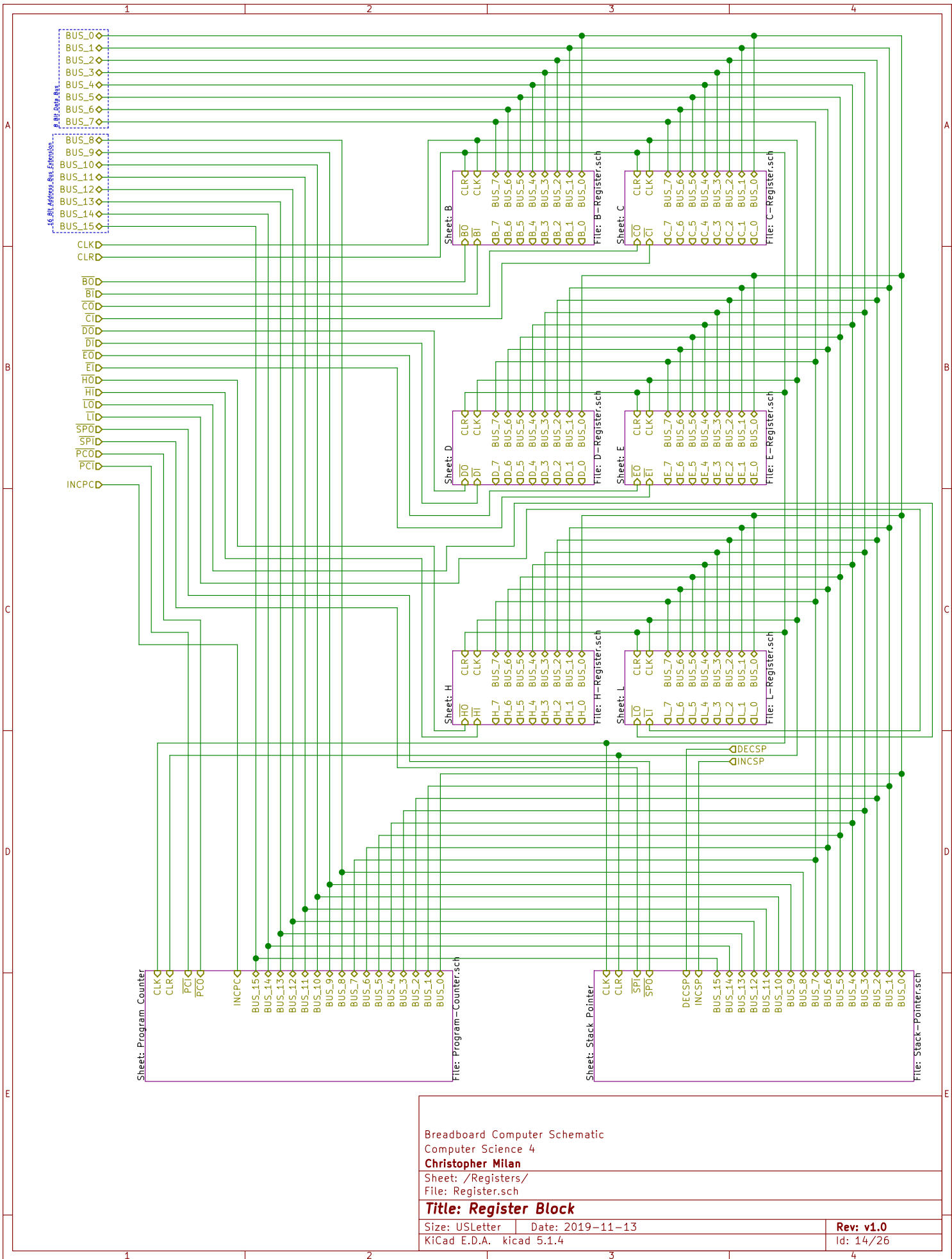
Size: USLetter | Date: 2019-11-13
KiCad E.D.A. | kicad 5.1.4

Rev: v1.0
Id: 12/26



Size: USLetter	Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4	

Rev: v1.0
Id: 13/26

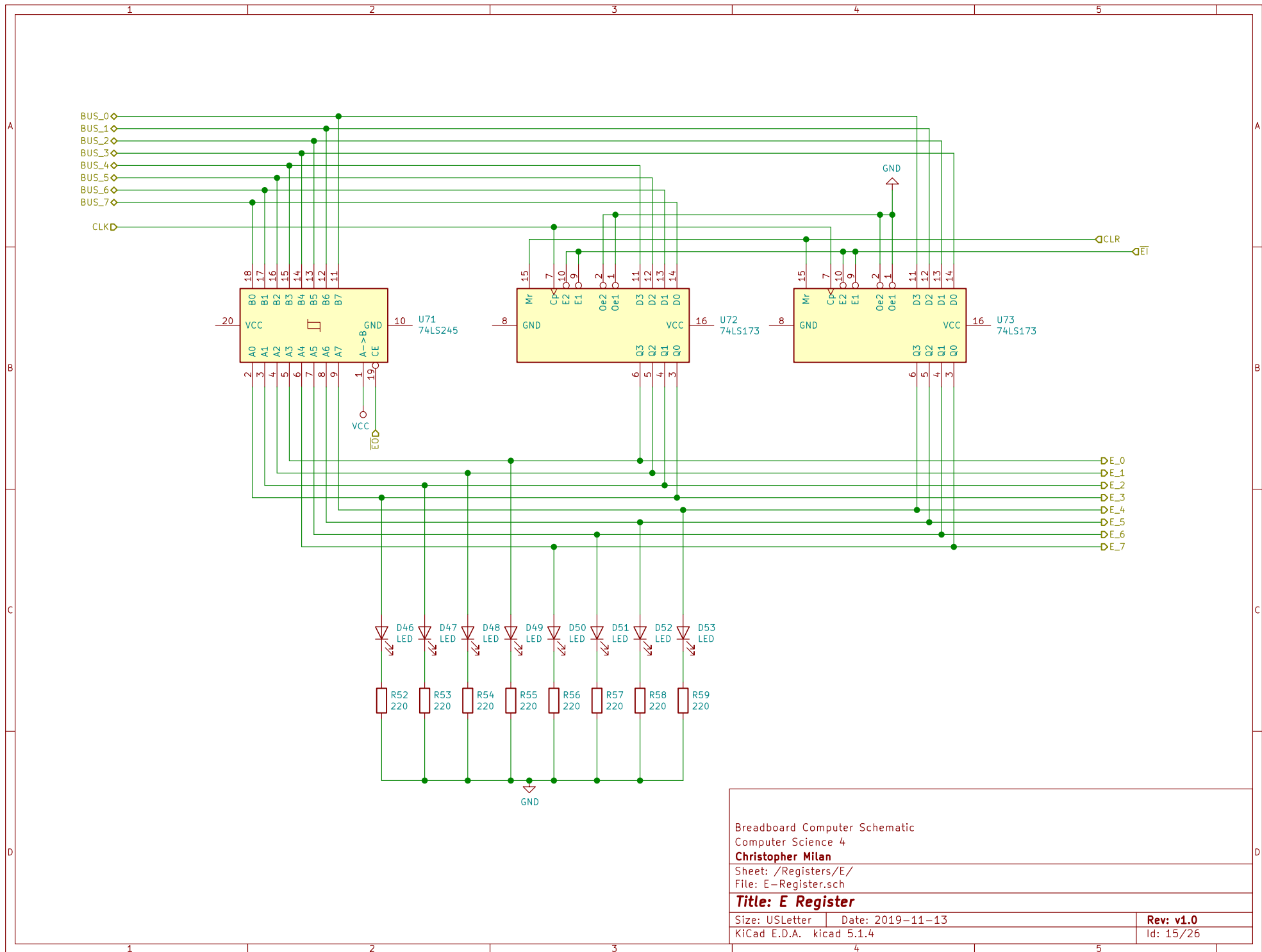


Breadboard Computer Schematic
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Sheet: /Registers/
File: Register.sch

Title: Register Block

Size: USLetter | Date: 2019-11-13
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Breadboard Computer Schematic
Computer Science 4

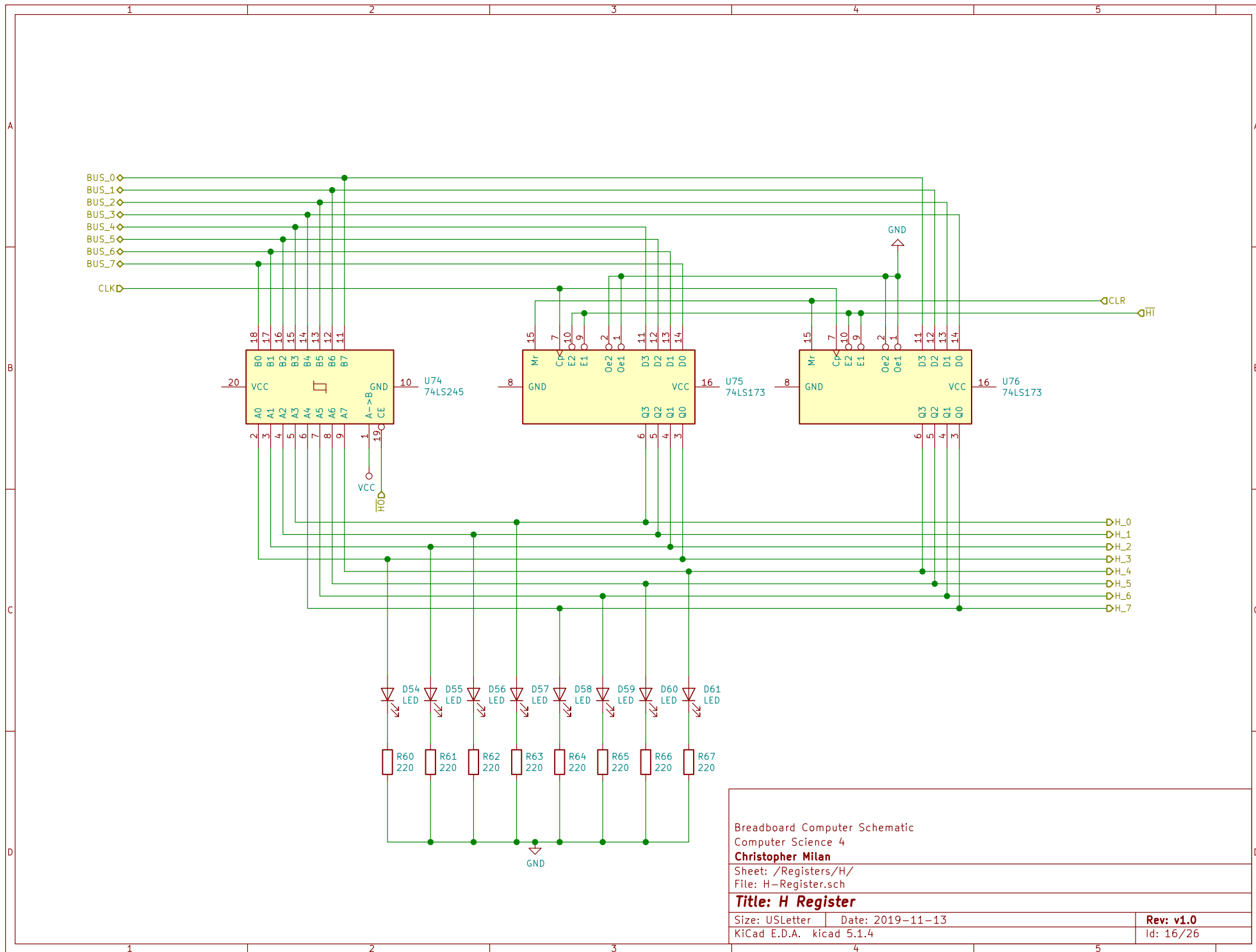
Christopher Milan

Sheet: /Registers/E/
File: E-Register.sch

Title: E Register

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
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Breadboard Computer Schematic
Computer Science 4

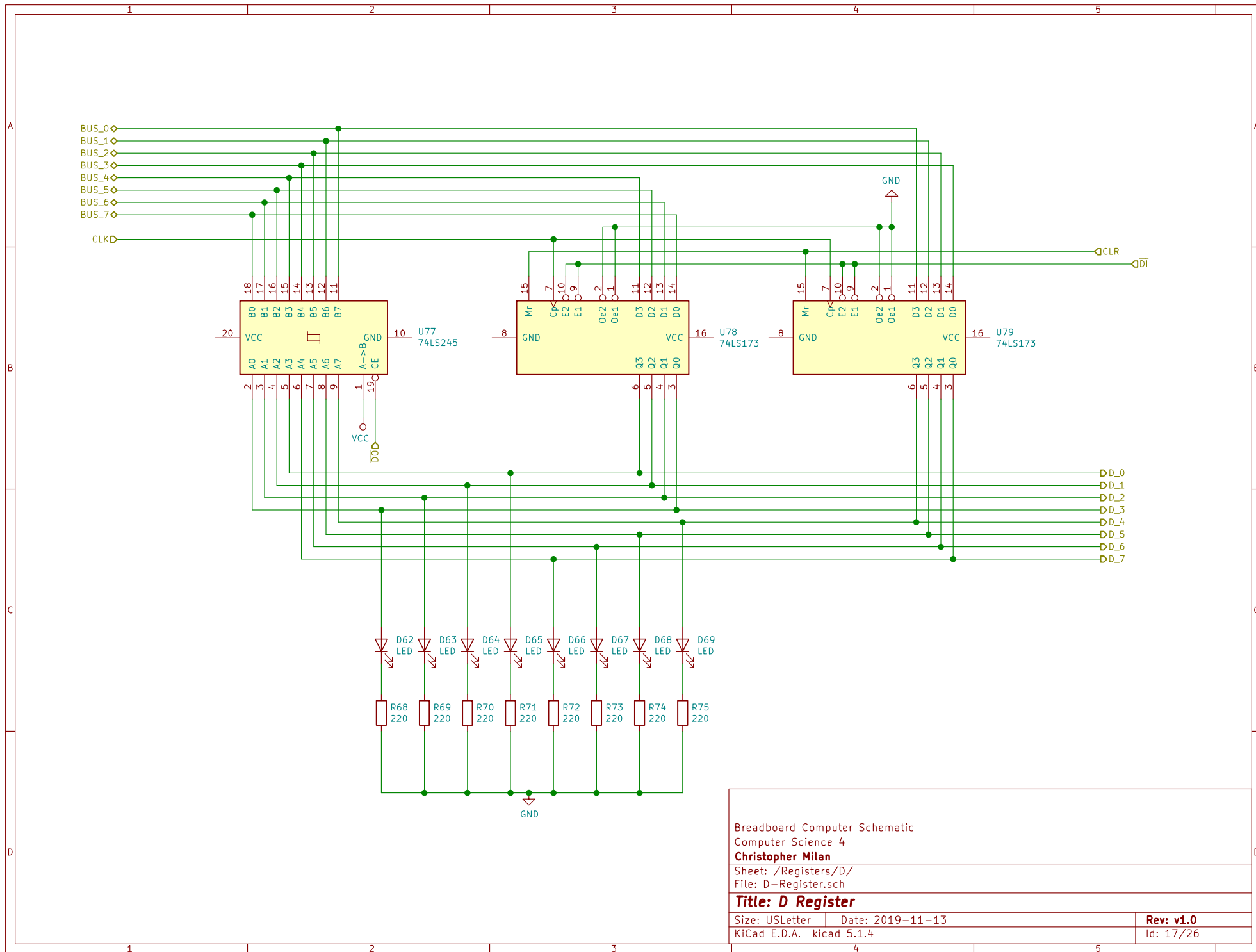
Christopher Milan

Sheet: /Registers/H/
File: H-Register.sch

Title: H Register

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

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Breadboard Computer Schematic
Computer Science 4

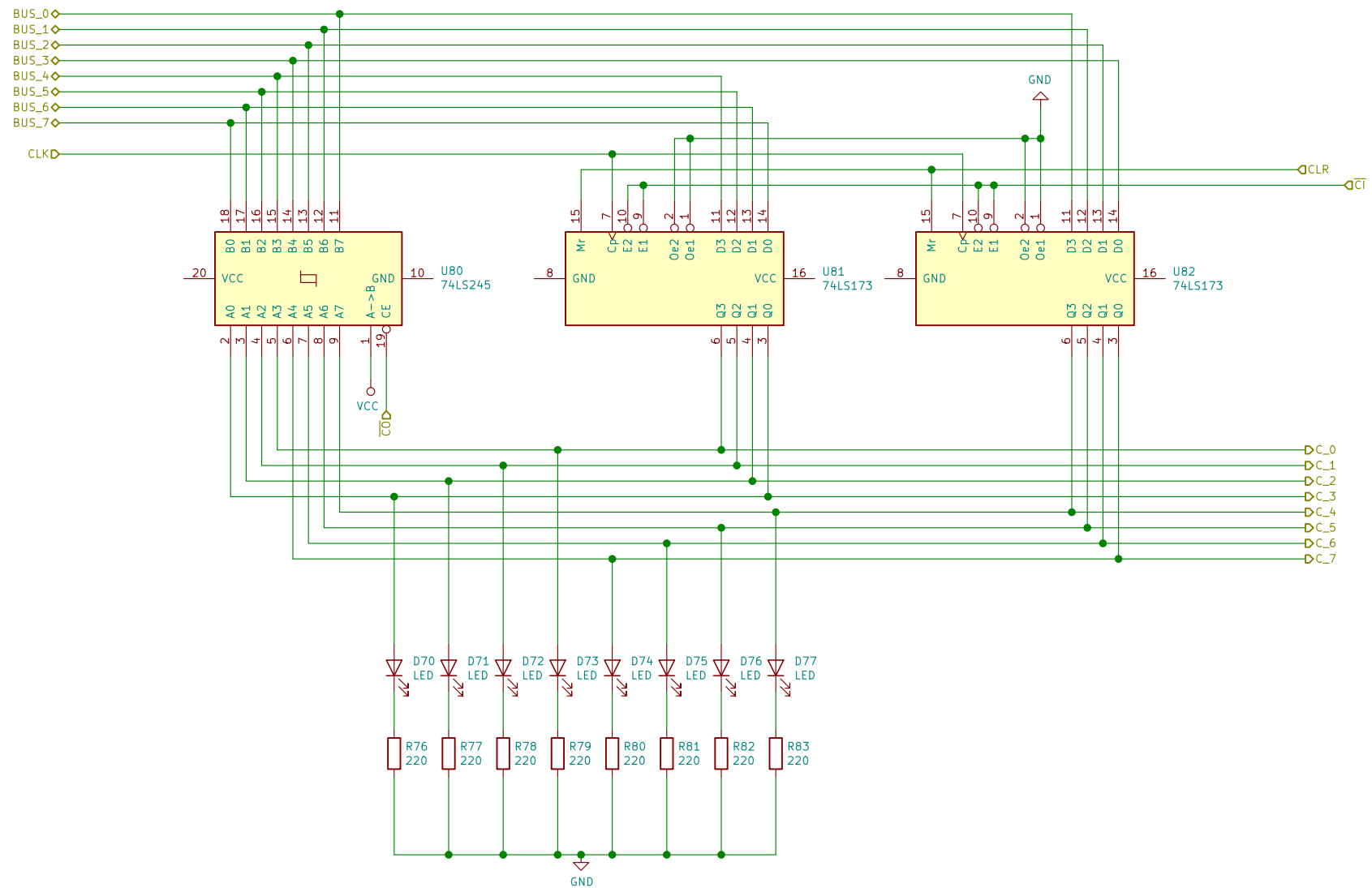
Christopher Milan

Sheet: /Registers/D/
File: D-Register.sch

Title: D Register

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

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Breadboard Computer Schematic
Computer Science 4

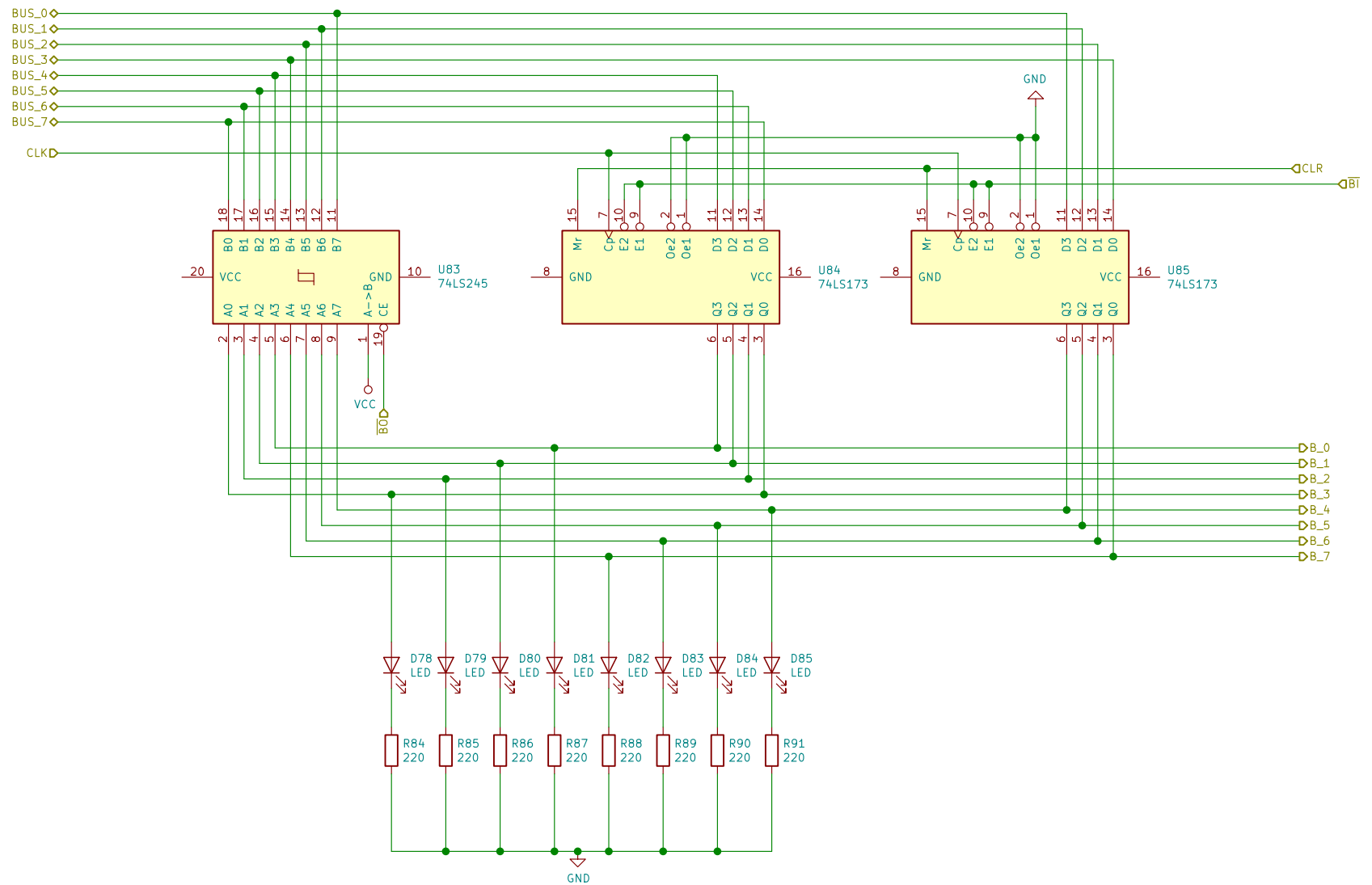
Christopher Milan

Sheet: /Registers/C/
File: C-Register.sch

Title: C Register

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
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Breadboard Computer Schematic
Computer Science 4

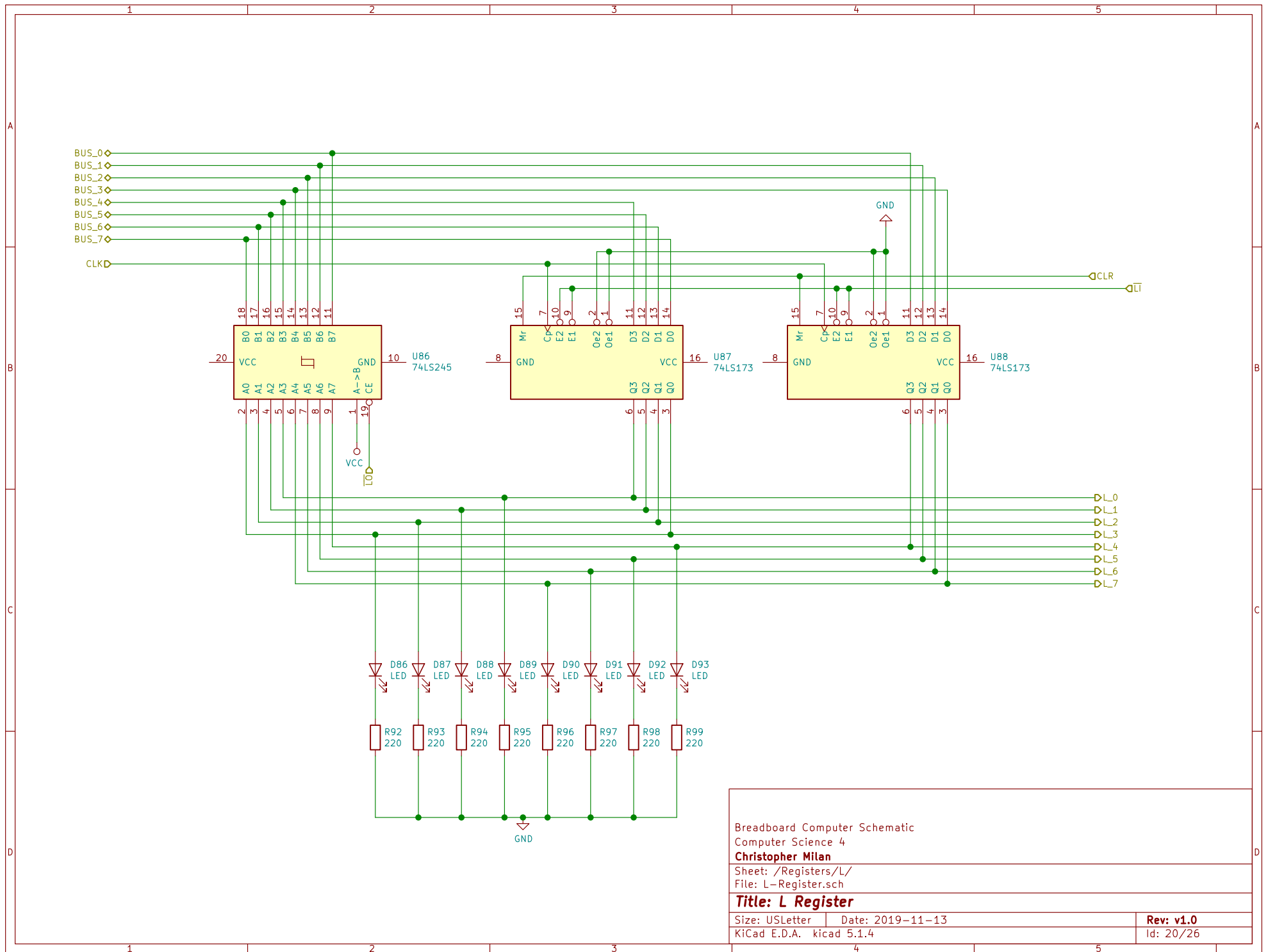
Christopher Milan

Sheet: /Registers/B/
File: B-Register.sch

Title: B Register

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
Id: 19/26



Breadboard Computer Schematic
Computer Science 4

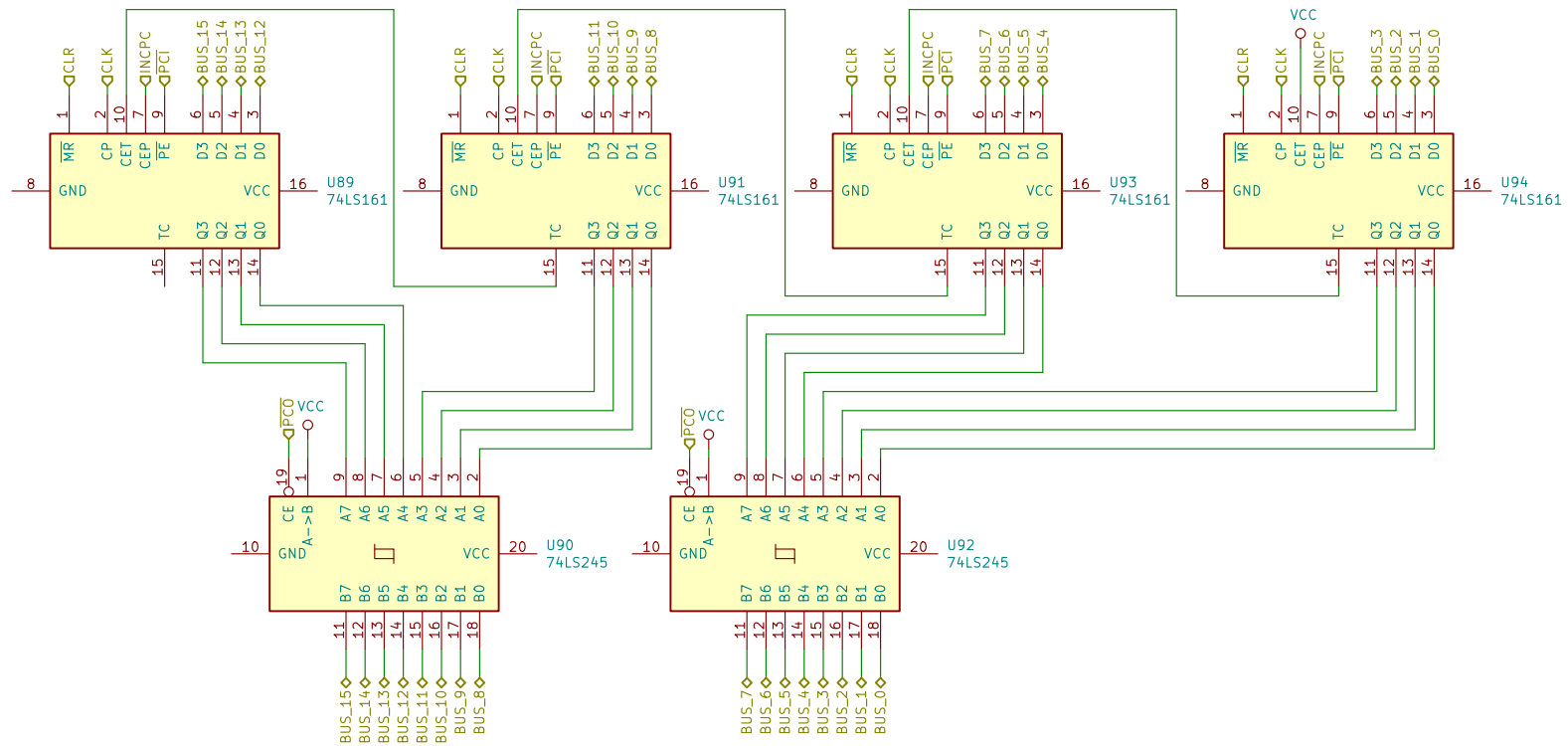
Christopher Milan

Sheet: /Registers/L/
File: L-Register.sch

Title: L Register

Size: USLetter Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
Id: 20/26



Breadboard Computer Schematic
Computer Science 4

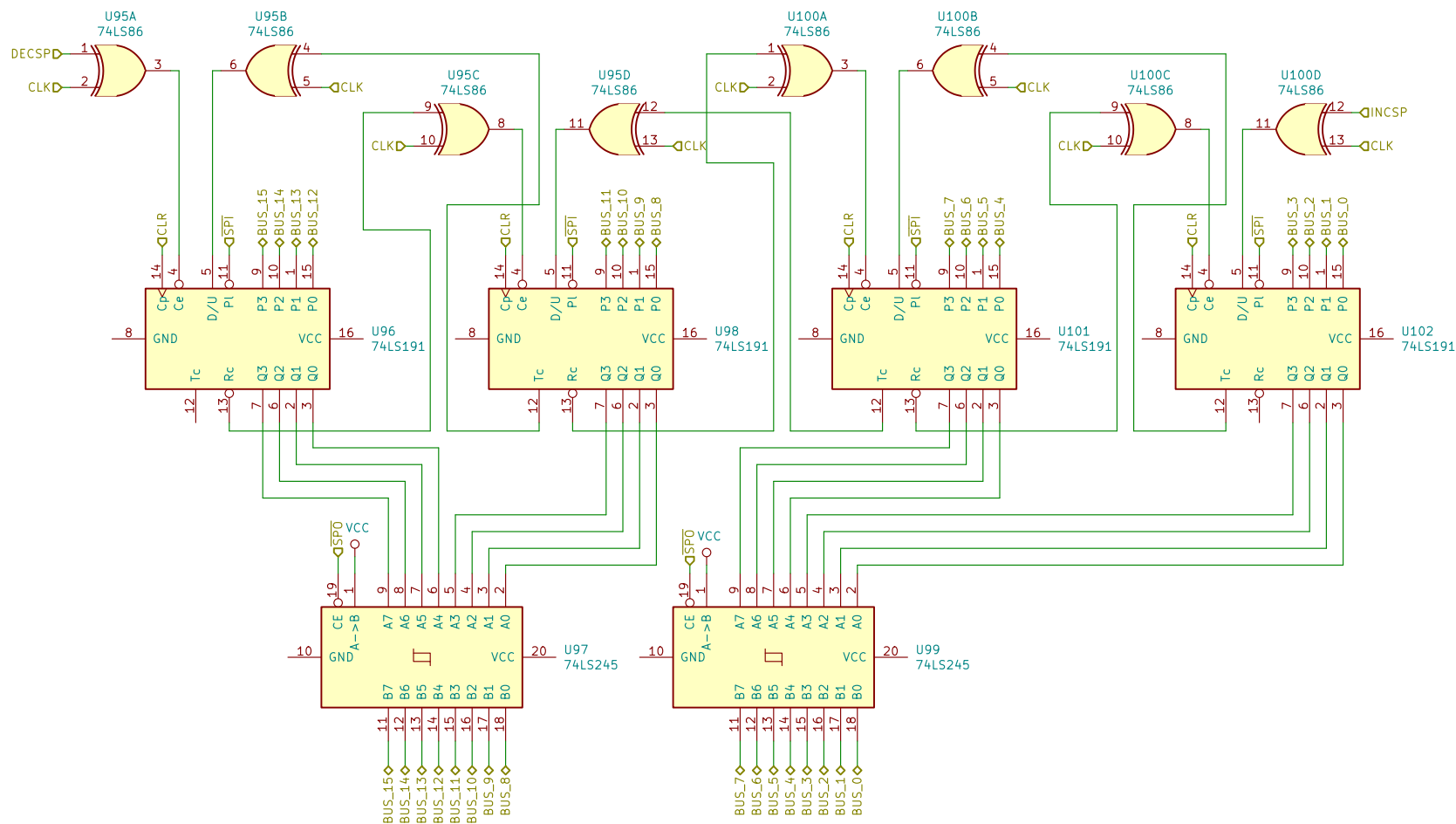
Christopher Milan

Sheet: /Registers/Program Counter/
File: Program-Counter.sch

Title: Program Counter

Size: USLetter | Date: 2019-11-13
KiCad E.D.A. | kicad 5.1.4

Rev: v1.0
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Breadboard Computer Schematic
Computer Science 4

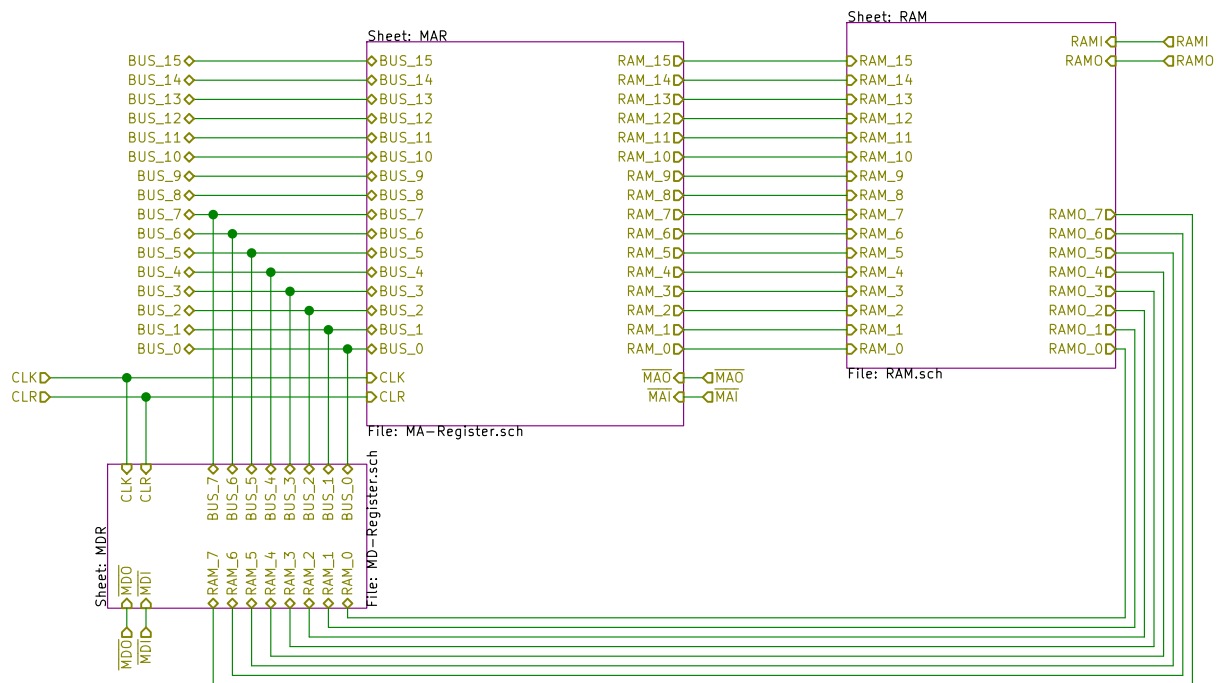
Christopher Milan

Sheet: /Registers/Stack Pointer/
File: Stack-Pointer.sch

Title: Stack Pointer

Size: USLetter Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

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Breadboard Computer Schematic
Computer Science 4

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Sheet: /Memory/

File: Memory.sch

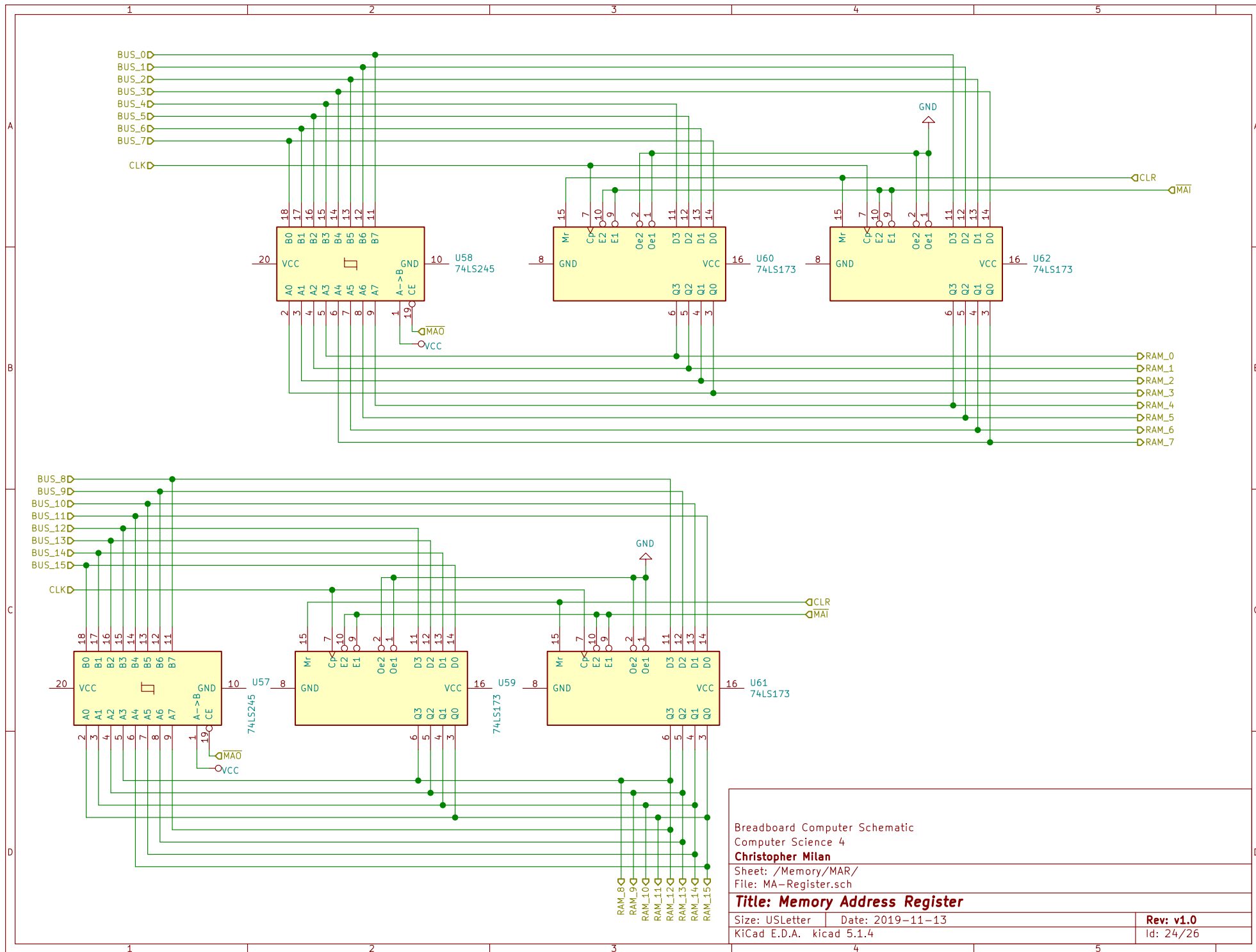
Title: Memory

Size: USLetter Date: 2019-11-13

KiCad E.D.A. kicad 5.1.4

Rev: v1.0

Id: 23/26

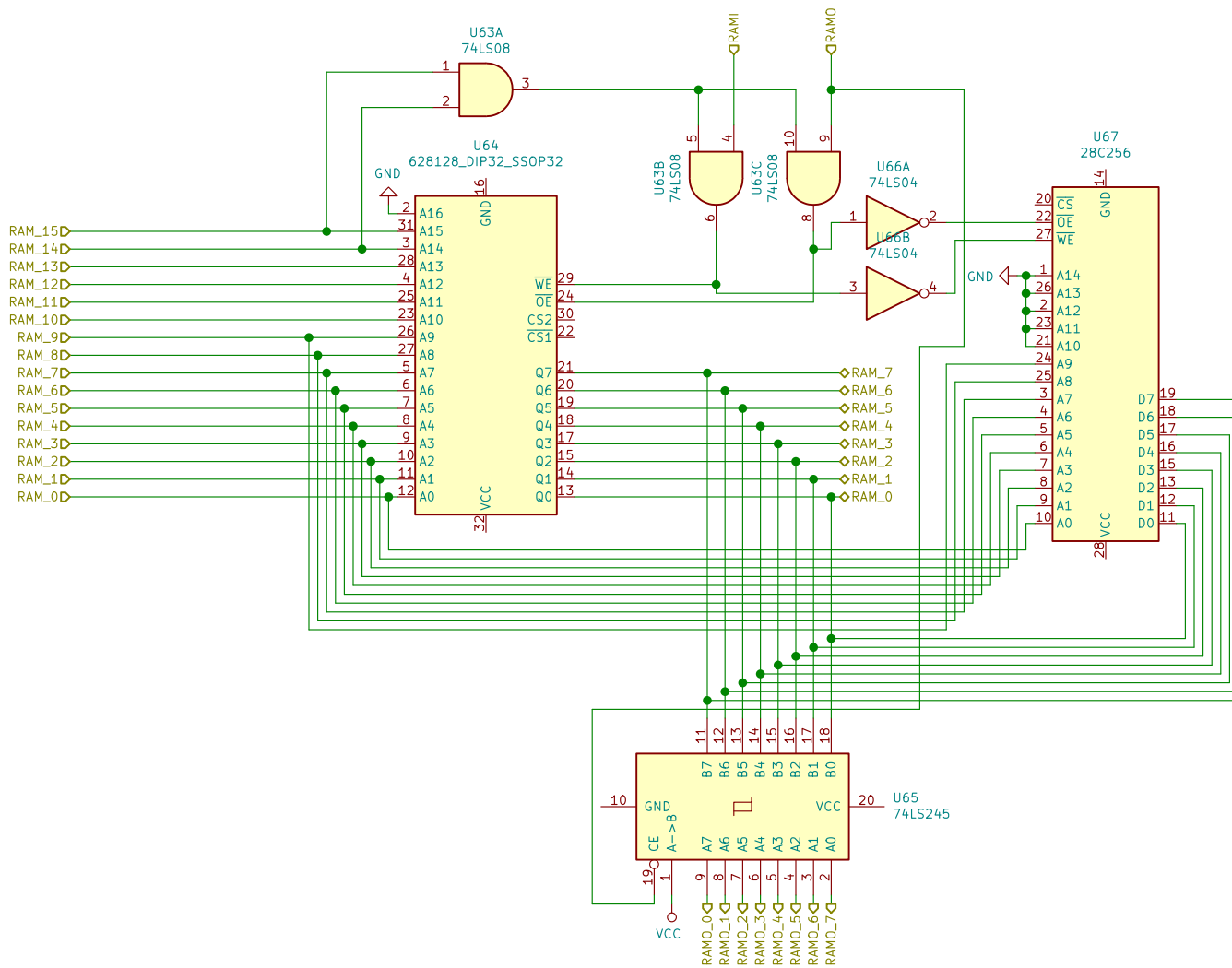


Breadboard Computer Schematic
Computer Science 4
Christopher Milan
Sheet: /Memory/MAR/
File: MA-Register.sch

Title: Memory Address Register

Size: USLetter Date: 2019-11-13
KiCad E.D.A. kicad 5.1.4

Rev: v1.0
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Breadboard Computer Schematic

Computer Science 4

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Sheet: /Memory/RAM/

File: RAM.sch

Title: Memory

Size: USLetter Date: 2019-11-13

KiCad E.D.A. kicad 5.1.4

Rev: v1.0

Id: 25/26

