Template Week 3 – Hardware

Student number: 563064

Assignment 3.1: Examine your phone

What processor is in your phone?

To which architecture family does this processor belong? In other words, which Instruction Set Architecture (ISA) is used?

How much RAM is in it?

How much storage does your phone have?

What operating system is running on your phone?

Approximately how many applications do you have installed?

Which application do you use the most?

Can your phone be charged with what type of plug?

Which I/O ports can you visually see on your phone?

Assignment 3.2: Examine your laptop

What processor is in your laptop?

To which architecture family does this processor belong? In other words, which Instruction Set Architecture (ISA) is used?

How much RAM is in it?

How much storage does your laptop have?

Which operating system is running on your laptop?

Approximately how many applications do you have installed?

Which application do you use the most?

Can your laptop be charged with what type of plug?

Which I/O ports can you visually see on your laptop?

Assignment 3.3: Power to the laptop

What is the input voltage?

What is the output voltage?

How many watts can your power adapter deliver?

Is the input voltage AC or DC?

Is the output voltage AC or DC?

AC/DC what is that?

If you reverse the polarity of the output voltage, is that bad for your laptop?

You forgot your power adapter, your laptop normally needs 15 watts. You will be loaned a power adapter that can deliver 50 watts. Voltage, polarity, etc. are all the same compared to the original power adapter. You can connect the borrowed power adapter to your laptop. What will happen? Also explain why you think that.

Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

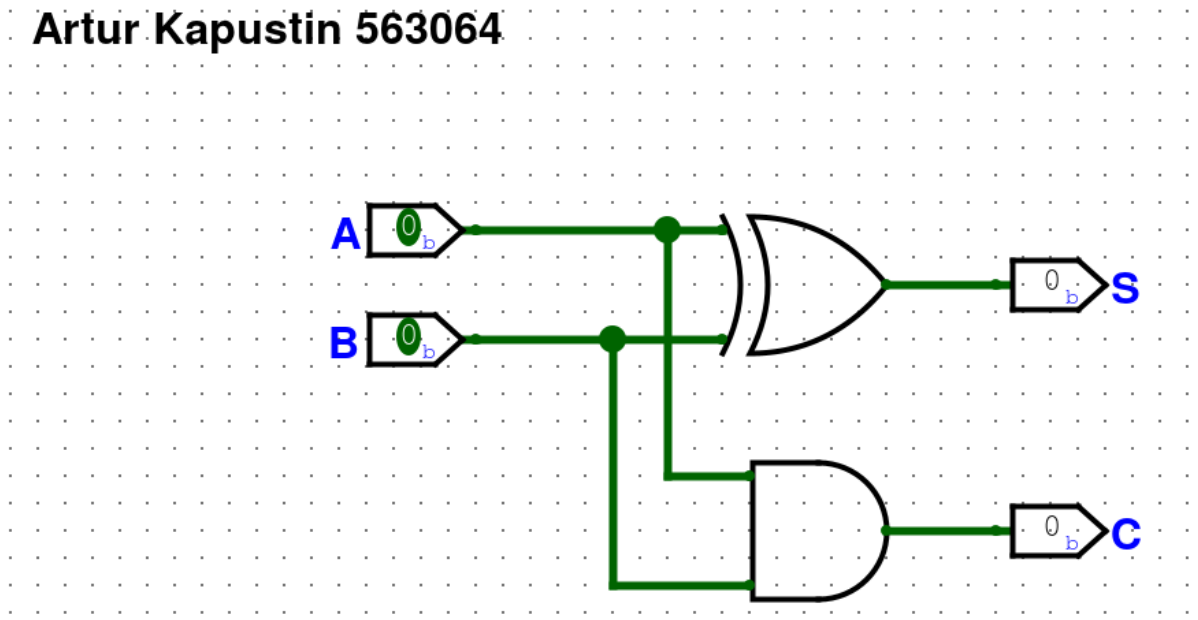
https://pcpartpicker.com/list/F3YTBq

Bonus point assignment – week 3

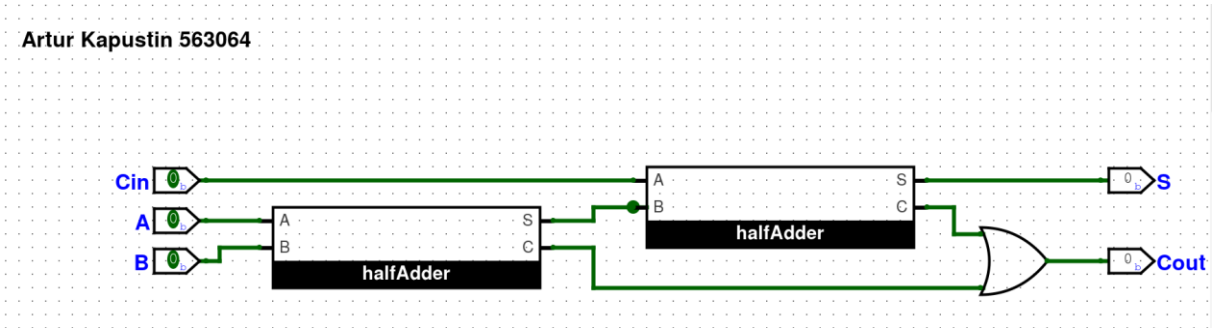
Complete the **half adder**, **full adder** and **4-bit adder** assignment as described in the PowerPoint slides of week 3 in Logisim. Save the chip design and also export three PNG pictures of the separate finished designs. See the PowerPoint slides of week 3.

Paste the three exported PNG pictures in here.

Half adder:



Full adder:


Artur Kapustin 563064
Cin
A
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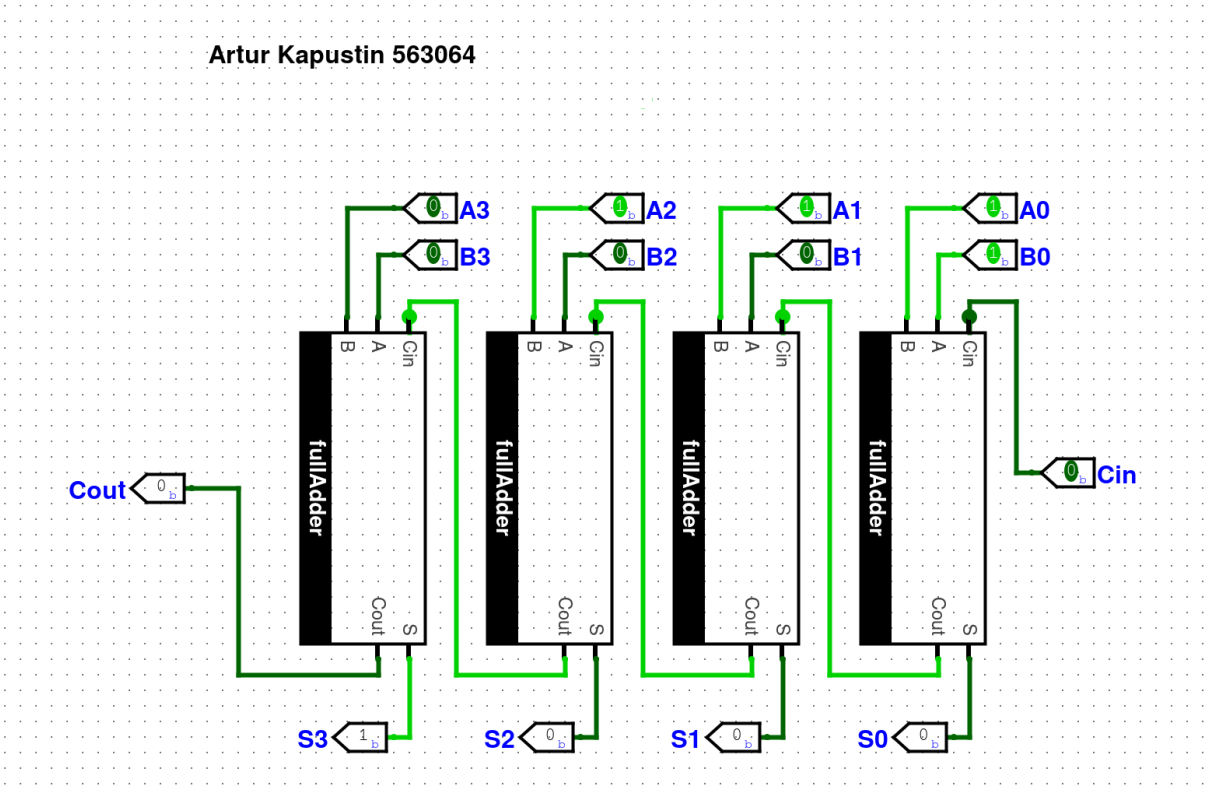
4bit adder: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A3
B3
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fullAdder
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