

Template Week 3 – Hardware

Student number: 588421

Assignment 3.1: Examine your phone

What processor is in your phone?

Apple A15 Bionic

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

ARM

How much RAM is in it?

4GB RAM

How much storage does your phone have?

128 GB

What operating system is running on your phone?

iOS

Approximately how many applications do you have installed?

94

Which application do you use the most?

Instagram

Can your phone be charged with what type of plug?

Lightning port

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

Lightning port

Assignment 3.2: Examine your laptop

What processor is in your laptop?

Intel® Core™ i7-10750H CPU @ 2.60 GHz

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

x64

How much RAM is in it?

40 GB RAM

How much storage does your laptop have?

1TB

Which operating system is running on your laptop?

Windows 11 Build 26200.7171

Approximately how many applications do you have installed?

66

Which application do you use the most?

Chrome

Can your laptop be charged with what type of plug?

Een ronde plug met pinnetje in het midden.

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

Linker kant power port, netwerk port, HDMI port, USB-A port en AUX en microfoon port

Rechter kant 2 USB-A ports en 1 USB-C port

Assignment 3.3: Power to the laptop

What is the input voltage?

100-240V ~ 50-60Hz

What is the output voltage?

19.5V 11.8A

How many watts can your power adapter deliver?

230W

Is the input voltage AC or DC?

AC

Is the output voltage AC or DC?

DC

AC/DC what is that?

Alternating current en Direct current. Van de muur naar je laptop

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

Ja hij verwacht een specifieke polariteit als die anders is dan gaat dat heel fout

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.

Ja je kan het veilig gebruiken. Zolang alles hetzelfde is maar alleen het watt hoger dan is het veilig om te gebruiken. Ookal kan de lader 50 watt geven geeft hij alleen maar wat nodig is.

Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

Ik heb mijn droom PC al dit zijn mijn specificaties:

NVIDIA RTX 4090

Ryzen 5900X

32GB RAM

Samsung SSD 990 PRO 4TB

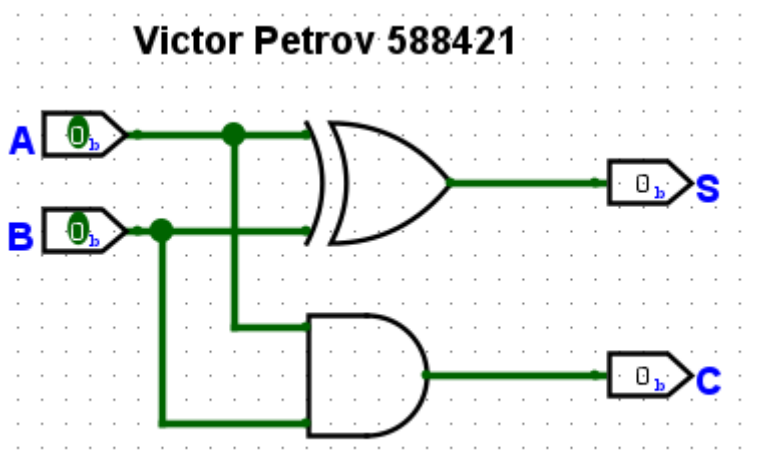
ROG STRIX X570-E Gaming moederbord

Mijn grafische kaart wordt een klein beetje gebottlenecked door mijn CPU maar ik kan alles spelen met mijn PC wat ik wil en op extreem hoge graphics dus ik ben zeer tevreden.

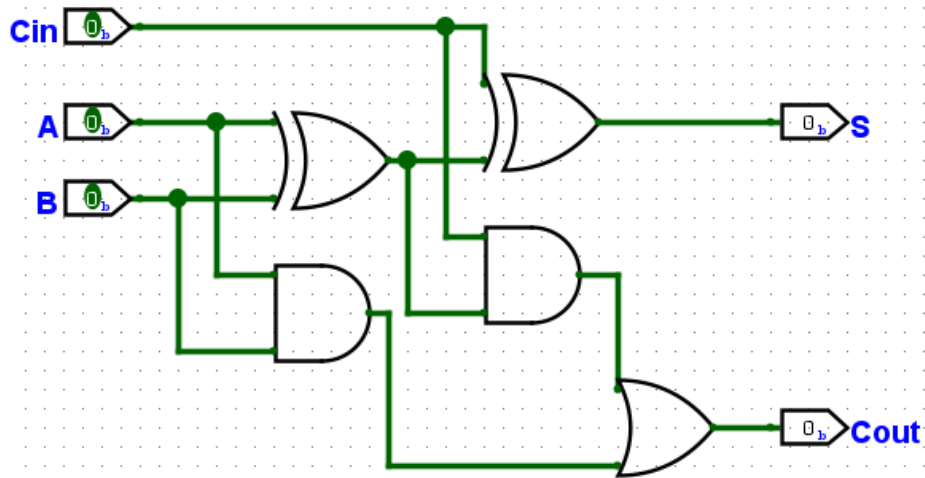
Assignment 3.5: Adders

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.

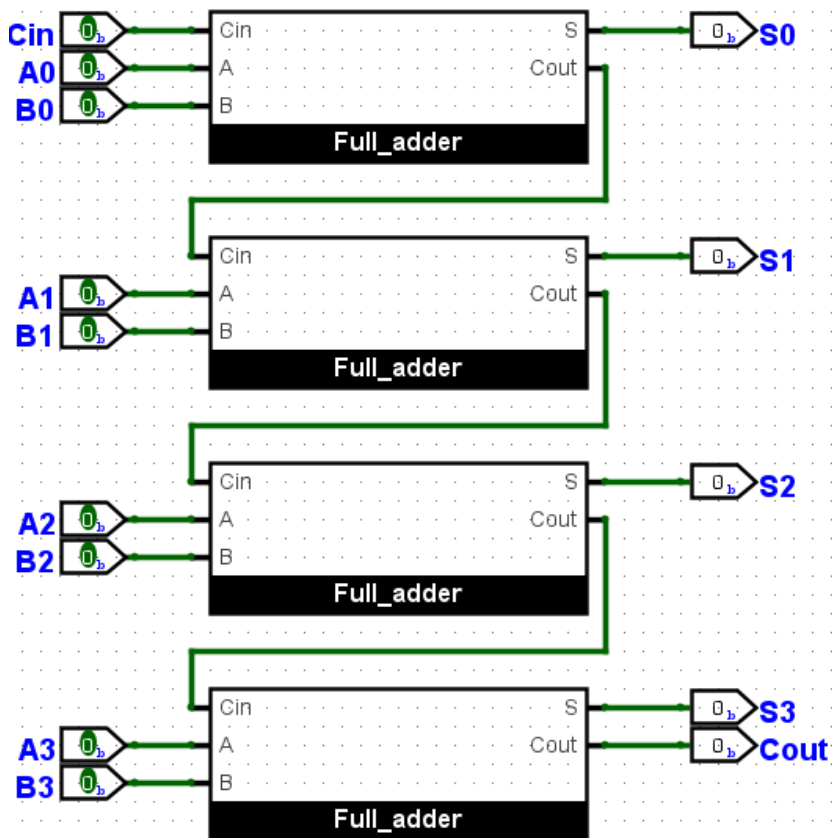
Paste the three exported PNG pictures in here.



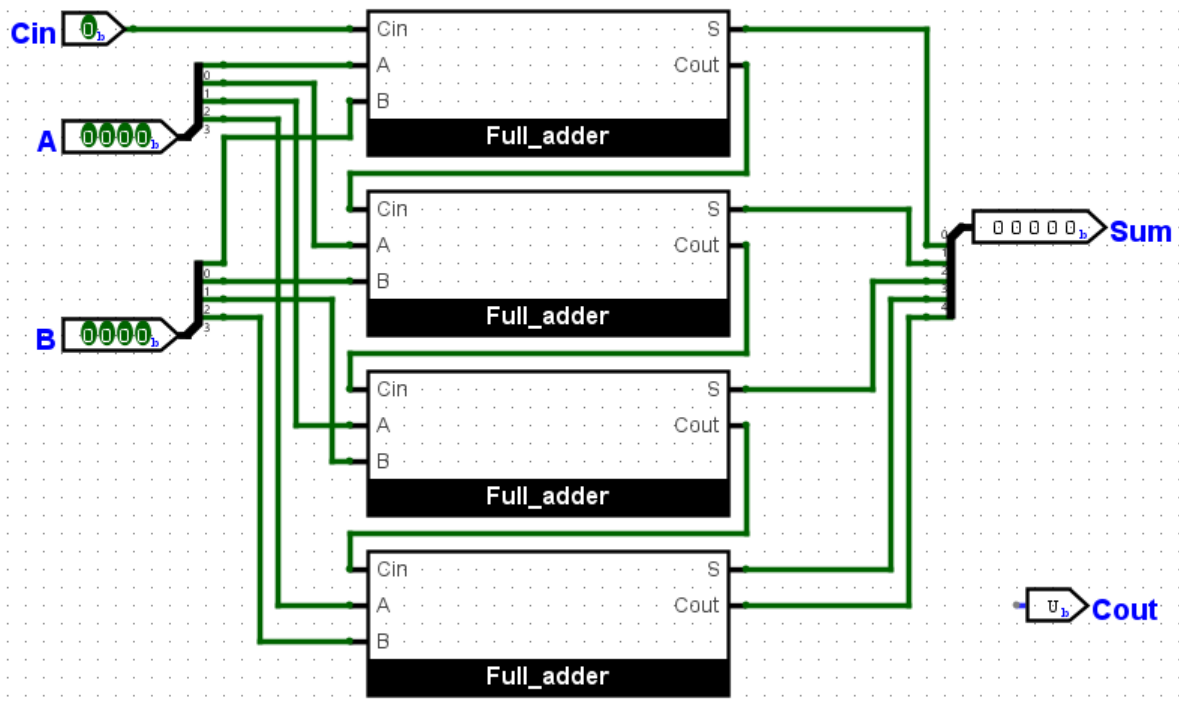
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