

Template Week 3 – Hardware

Student number: 571291

Assignment 3.1: Examine your phone

What processor is in your phone?

- Qualcomm Snapdragon 675

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

ARMv8

How much RAM is in it?

6 GB

How much storage does your phone have?

128 GB

What operating system is running on your phone?

Android

Approximately how many applications do you have installed?

125: honderd van deze apps staan er al automatisch op bij aanschaf van de telefoon

Which application do you use the most?

Spotify

Can your phone be charged with what type of plug?

USB-C

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

USB-C , Audio port

Assignment 3.2: Examine your laptop

What processor is in your laptop?

AMD Ryzen 5

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?

16 GB

How much storage does your laptop have?

512 GB

Which operating system is running on your laptop?

Windows

Approximately how many applications do you have installed?

150: hier reken ik de standaardprogramma's mee

Which application do you use the most?

Google Chrome- Spotify

Can your laptop be charged with what type of plug?

USB-C- AC adapter

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

USB-C, AC port, USB, HDMI, LAN port, Audio port,

Assignment 3.3: Power to the laptop

What is the input voltage?

100

What is the output voltage?

20

How many watts can your power adapter deliver?

120 W

Is the input voltage AC or DC?

AC

Is the output voltage AC or DC?

DC

AC/DC what is that?

Een leuke band

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

Op lange termijn wel, AC laden is gezonder voor de accu. Maar bij hoge nood DC laden het best is.

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.

De laptop zal wel opgeladen worden, maar je beschadigt hiermee de accu. Want de accu is behoed voor zoveel input.

Assignment 3.4: Build your dream PC

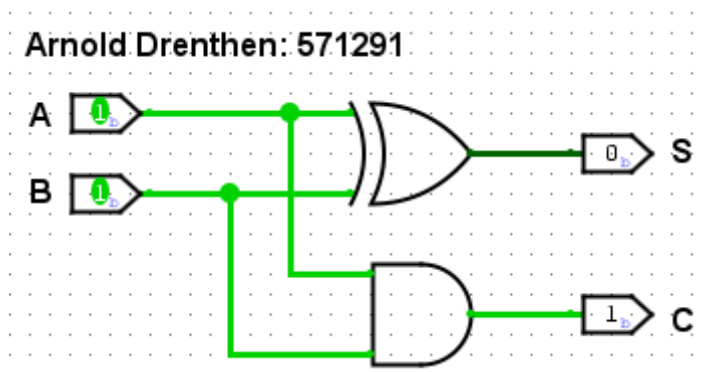
Screenshots PC configuration + motivation:

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.

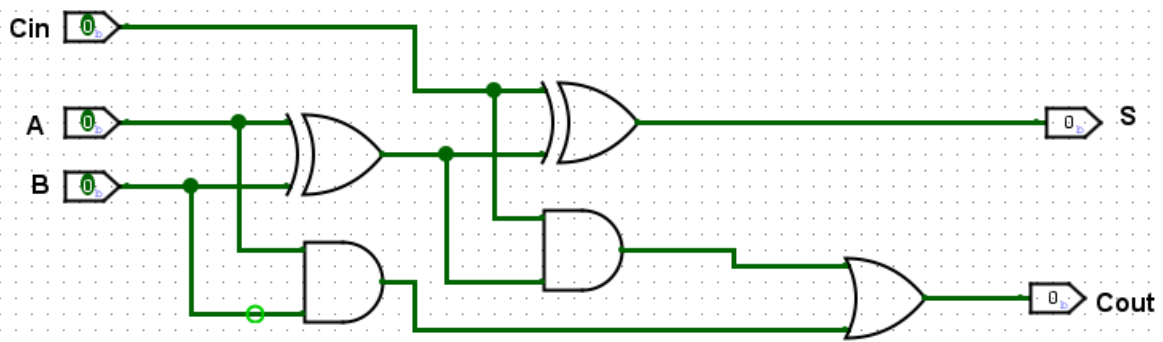
Paste the three exported PNG pictures in here.

Half Adder:



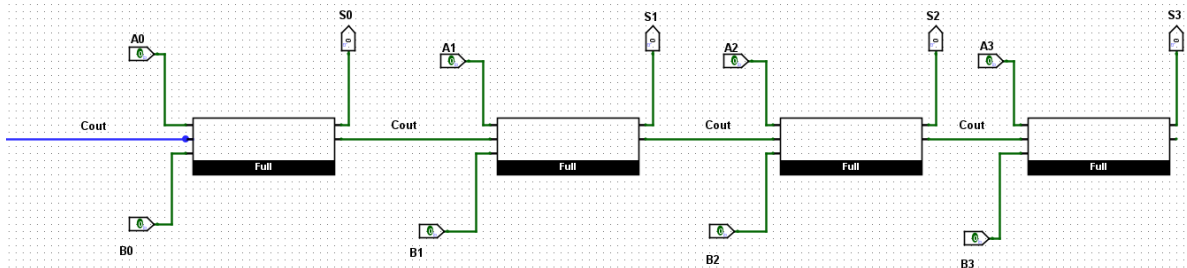
Full Adder:

Arnold Drenthen: 571291

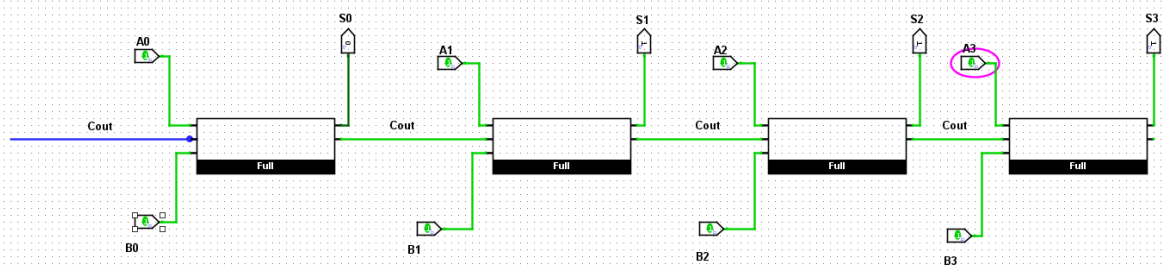


4-bit Adder:

Arnold Drenthen: 571291 4-Bit Adder



Arnold Drenthen: 571291 4-Bit Adder



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