Template Week 3 – Hardware

Student number:

Assignment 3.1: Examine your phone

What processor is in your phone?

Qualcomm Snapdragon 730

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

ARM architecture

How much RAM is in it?

8GB of RAM

How much storage does your phone have?

128GB

What operating system is running on your phone?

Android 10

Approximately how many applications do you have installed?

Approximately 100

Which application do you use the most?

Telegram

Can your phone be charged with what type of plug?

USB Type-C

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

USB Type-C port

3.5mm headphone jack

Speaker grille and microphone holes

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:

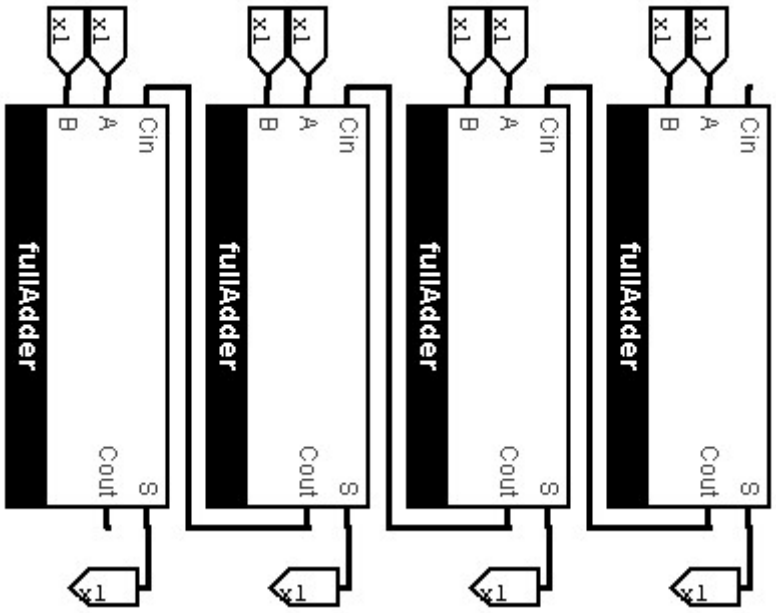
https://nl.pcpartpicker.com/list/wrmjyW

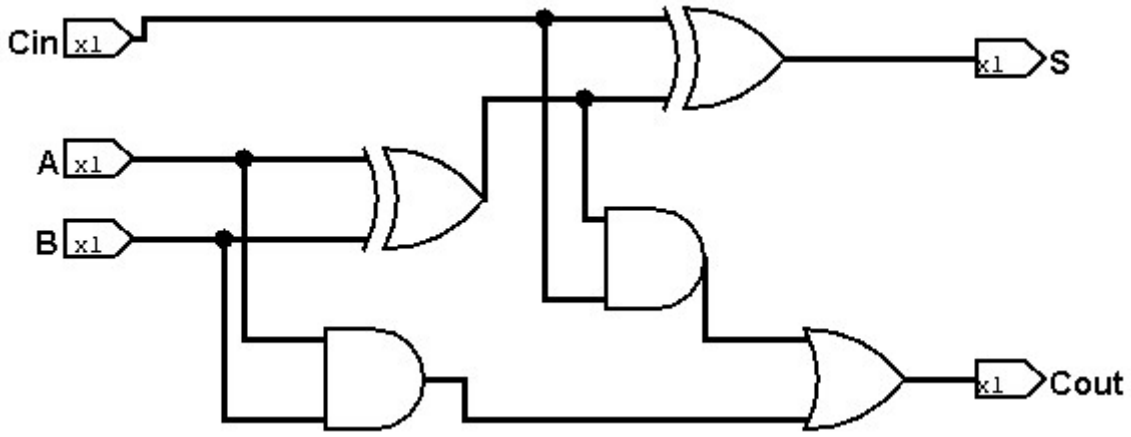
I'm not sure with the choice at all, because my current build is satisfying enough to do whatever I wish to accomplish. However, it looks like a decent build to obtain.

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.





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Ready? Save this file and export it as a pdf file with the name: **week3.pdf**