

Template Week 3 – Hardware

Student number: 573190

Assignment 3.1: Examine your phone

What processor is in your phone?

Exynos 9611

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

RISC

How much RAM is in it?

4GB

How much storage does your phone have?

128GB

What operating system is running on your phone?

Android

Approximately how many applications do you have installed?

36

Which application do you use the most?

Whatsapp

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, headphone port

Assignment 3.2: Examine your laptop

What processor is in your laptop?

Intel(R) Core(TM) i7-10750H CPU @ 2.60GHz 2.59 GHz

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

CISC

How much RAM is in it?

16GB

How much storage does your laptop have?

500GB

Which operating system is running on your laptop?

Windows 11

Approximately how many applications do you have installed?

50

Which application do you use the most?

FireFox

Can your laptop be charged with what type of plug?

AC Adapter

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

USB-C, HDMI, 3x USB, ethernet port, headset port.

Assignment 3.3: Power to the laptop

What is the input voltage?

100 – 240 Volt

What is the output voltage?

19.5 Volt

How many watts can your power adapter deliver?

180 Watt

Is the input voltage AC or DC?

AC

Is the output voltage AC or DC?

DC

AC/DC what is that?

Alternating Current and Direct Current

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

Yes, because reversing the polarity can send the current into the wrong direction, which causes damages to 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.

If the currents are the same, you can use the borrowed charger.

Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

The first screenshot shows the PCPartPicker website with a build configuration for a desktop PC. The components listed are:

Component	Selection	Base	Promo	Shipping	Tax	Price	Where
CPU	AMD Ryzen 5 3600 3.6 GHz 6-Core Processor	€90.99	—	—	—	€90.99	amazon.nl Buy
CPU Cooler	Cooler Master Hyper 212 Black Edition 42 CFM CPU Cooler	€41.97	—	—	—	€41.97	amazon.nl Buy
Motherboard	MSI B550M PRO-VDH WIFI Micro ATX AM4 Motherboard	€114.95	—	FREE	—	€114.95	MEDGEMO Buy
Memory	G.Skill Ripjaws V 32 GB (2 x 16 GB) DDR4-3200 CL16 Memory	€64.22	—	—	—	€64.22	amazon.nl Buy
Storage	Samsung 990 Pro 2 TB M.2-2280 PCIe 4.0 X4 NVME Solid State Drive	€149.00	—	FREE	—	€149.00	Buy
Video Card	MSI GeForce RTX 3060 Ventus 2X 12G GeForce RTX 3060 12GB 12 GB Video Card	€288.00	—	FREE	—	€288.00	AZERTY Buy

The second screenshot shows the continuation of the PC build configuration, including the Case, Power Supply, Operating System, Monitor, and Expansion Cards / Networking. The total price is €1178.17.

Component	Selection	Base	Promo	Shipping	Tax	Price	Where
Case	Corsair 4000D Airflow ATX Mid Tower Case	€74.90	—	FREE	—	€74.90	AZERTY Buy
Power Supply	Corsair RM750e (2023) 750 W 80+ Gold Certified Fully Modular ATX Power Supply	€97.90	—	FREE	—	€97.90	ALTERNATE Buy
Operating System	Choose An Operating System	—	—	—	—	—	—
Monitor	Asus TUF Gaming VG27AQ 27.0" 2560 x 1440 165 Hz Monitor	€256.24	—	—	—	€256.24	amazon.nl Buy
Expansion Cards / Networking	Sound Cards, Wired Network Adapters, Wireless Network Adapters	—	—	—	—	—	—
Peripherals	Headphones, Keyboards, Mice, Speakers, Webcams	—	—	—	—	—	—
Accessories / Other	Case Accessories, Case Fans, Fan Controllers, Thermal Compound, External Storage, Optical Drives, UPS Systems	—	—	—	—	—	—

Total: €1178.17

Buy From Amazon Netherlands

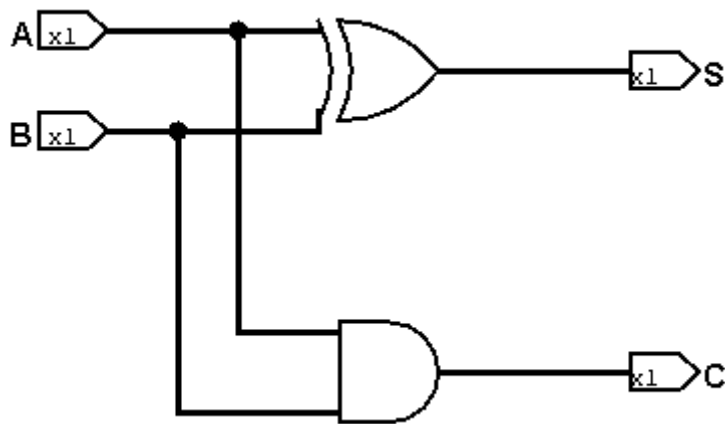
Motivation:

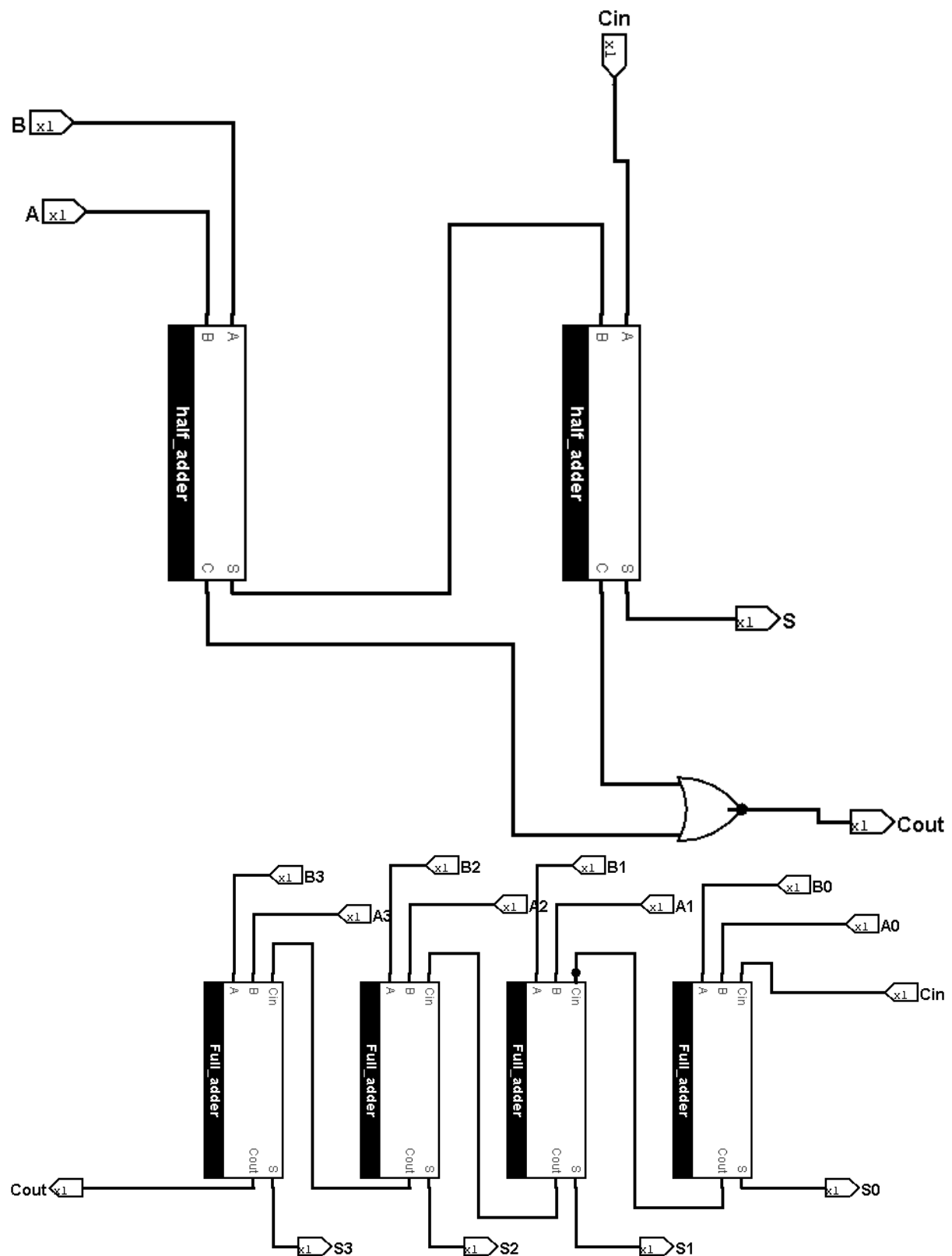
I chose these items, because they are more powerful than the items in my own laptop. Also, they are compatible with each other.

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 export three PNG pictures of the separate finished designs. See the PowerPoint slides of week 3.

Paste the three exported PNG pictures in here.





Ready? Save this file and export it as a pdf file with the name: [week3.pdf](#)