

Template Week 3 – Hardware

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Assignment 3.1: Examine your phone

What processor is in your phone?

Octa-core (4x2.4 GHz Cortex-A78 & 4x2.0 GHz Cortex-A55)

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

Arm A-78

How much RAM is in it?

4-12 gb

How much storage does your phone have?

256GB

What operating system is running on your phone?

Android 14, up to 4 major Android upgrades, One UI 7

Approximately how many applications do you have installed?

65

Which application do you use the most?

whatsapp

Can your phone be charged with what type of plug?

25 W wired

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

USB Type-C 2.0, OTG

Assignment 3.2: Examine your laptop

What processor is in your laptop?

AMD Ryzen 7 7735HS with Radeon Graphics

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

ryzen

How much RAM is in it?

32 GB

How much storage does your laptop have?

954GB

Which operating system is running on your laptop?

Window 11

Approximately how many applications do you have installed?

100

Which application do you use the most?

Fire fox

Can your laptop be charged with what type of plug?

M2 16v

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

Usb-c, hdmi, ethernet, usb type a, audio, usb- micro

Assignment 3.3: Power to the laptop

What is the input voltage?

240v

What is the output voltage?

19,5v

How many watts can your power adapter deliver?

135W

Is the input voltage AC or DC?

ac

Is the output voltage AC or DC?

ac

AC/DC what is that?

Alternating / direct current power.

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

yes

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.

Niet veel want er zit bescherming in je laptop

Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

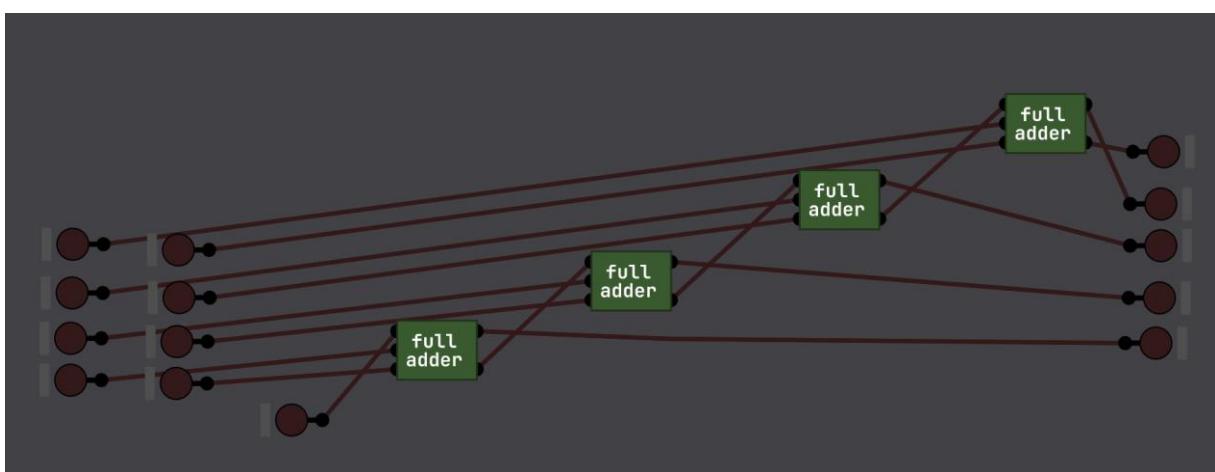
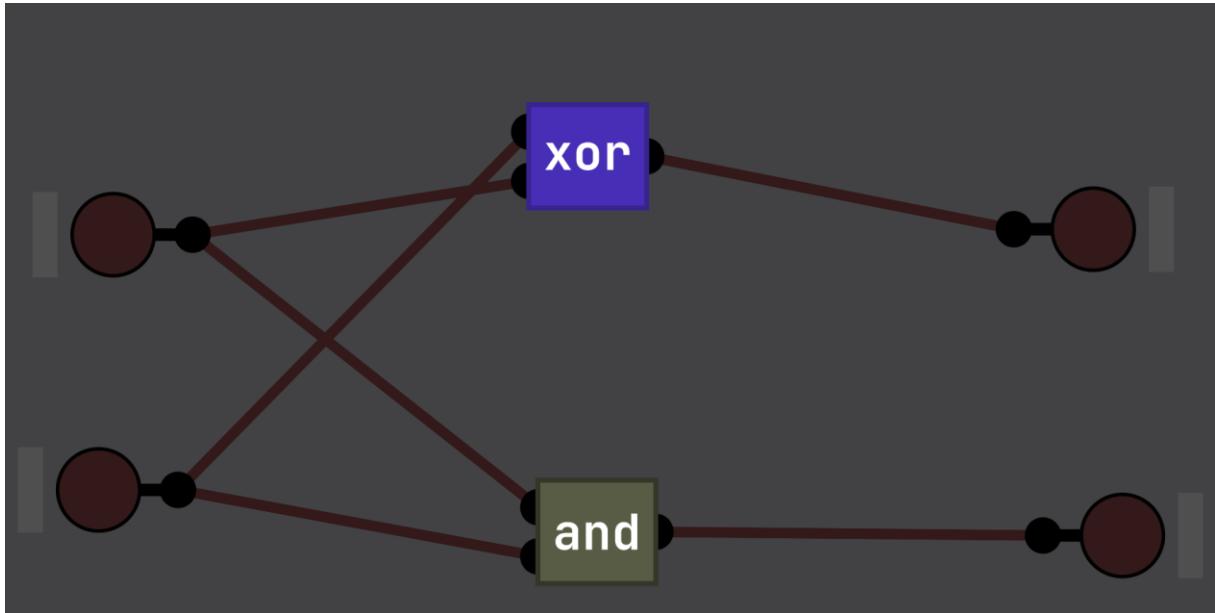
CPU		AMD Ryzen 7 9800X3D 4.7 GHz 8-Core Processor	\$449.00	—	✓Prime	—	In stock	\$449.00	amazon.com	Buy
CPU Cooler		ARCTIC Liquid Freezer III Pro 360 77 CFM Liquid CPU Cooler	\$89.99	—	✓Prime	—	Available soon	\$89.99	amazon.com	Buy
Motherboard		MSI MAG B850M MORTAR WIFI Micro ATX AM5 Motherboard	\$219.99	—	FREE	—	In stock	\$219.99	msi	Buy
Memory		Crucial Pro 64 GB (2 x 32 GB) DDR5-6000 CL40 Memory	—	—	—	—	—	\$153.00	Purchased	Buy
Storage		Samsung 990 Pro 1 TB M.2-2280 PCIe 4.0 X4 NVME Solid State Drive	\$109.99	—	FREE	—	In stock	\$109.99	Abt	Buy
Storage		Western Digital WD BLACK SN7100 4 TB M.2-2280 PCIe 4.0 X4 NVME Solid State Drive	—	—	—	—	—	\$230.00	Purchased	Buy
Video Card		NVIDIA Founders Edition GeForce RTX 5090 32 GB Video Card	—	—	—	—	—	\$2000.00	Purchased	Buy
Case		Lian Li A3-mATX MicroATX Mini Tower Case	—	—	—	—	No Prices Available	—	Buy	
Power Supply		Lian Li EDGE 1300 W 80+ Platinum Certified Fully Modular ATX Power Supply	\$179.99	—	✓Prime	—	In stock	\$179.99	amazon.com	Buy
Case Fan		ARCTIC P12 Slim PWM PST 41.1 CFM 120 mm Fan	\$9.99	—	✓Prime	—	In stock	\$9.99	amazon.com	Buy
Case Fan		ARCTIC P12 Pro PST 77 CFM 120 mm Fan	\$9.49	—	✓Prime	—	In stock	\$9.49	amazon.com	Buy

Goede high end build die compact is en er gaaf uit ziet

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.



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