

Template Week 3 – Hardware

Student number: 572750

Assignment 3.1: Examine your phone

What processor is in your phone?

Apple A17 Pro

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

ARMv8.6-A

How much RAM is in it?

8GB ram

How much storage does your phone have?

258GB

What operating system is running on your phone?

IOS 18.1.1

Approximately how many applications do you have installed?

110

Which application do you use the most?

TikTok

Can your phone be charged with what type of plug?

My phone can be charged with USB type C

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

1

Assignment 3.2: Examine your laptop

What processor is in your laptop?

13th Gen Intel(R) Core(TM) i9-13900H

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

Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2

How much RAM is in it?

32GB

How much storage does your laptop have?

1TB

Which operating system is running on your laptop?

Windows 11 version 23H2

Approximately how many applications do you have installed?

61

Which application do you use the most?

google chrome

Can your laptop be charged with what type of plug?

DCIN

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

DCIN

HDMI

UTP

USB

USB-C(Thunderbolt)

USB-C(Displayport)

3.5mm jack

SD card jack

Assignment 3.3: Power to the laptop

What is the input voltage?

3680W

What is the output voltage?

240W

How many watts can your power adapter deliver?

240W

Is the input voltage AC or DC?

230V AC

Is the output voltage AC or DC?

20V DC

AC/DC what is that?

Identifying AC and DC current involves observing the direction of current flow and the characteristics of the electrical signal

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

probably cause there is a reason that there is a correct way around.

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

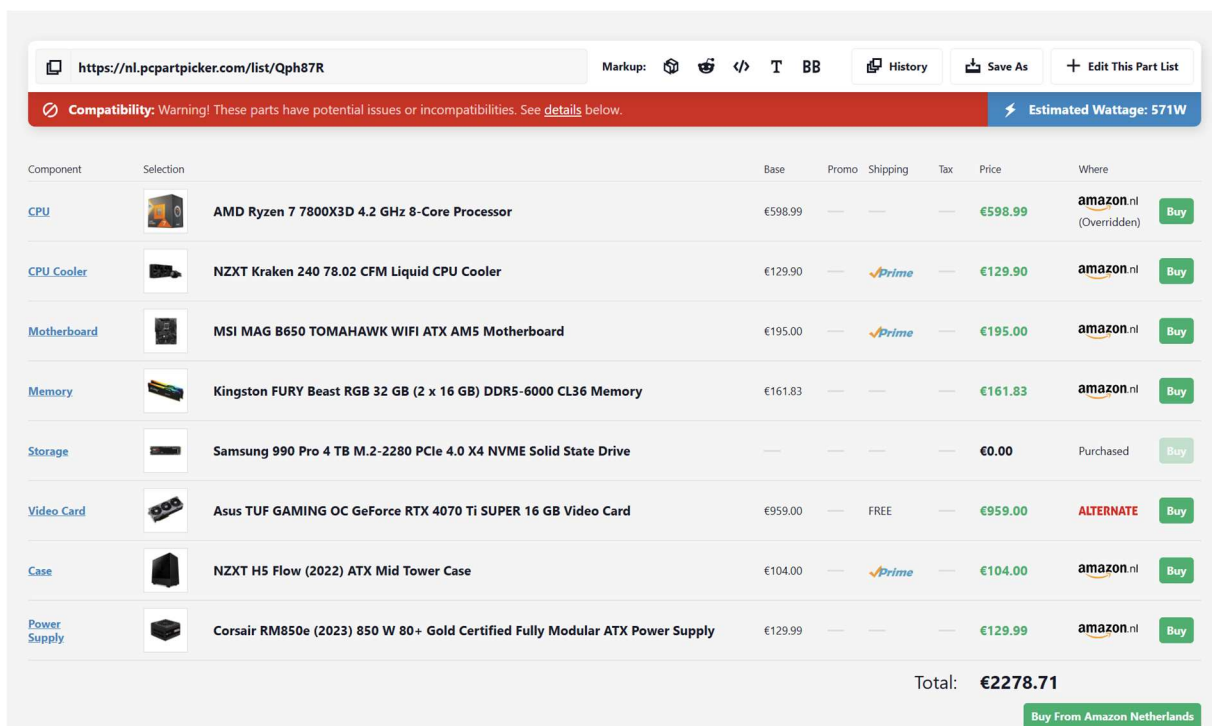
power adapter. You can connect the borrowed power adapter to your laptop. What will happen? Also explain why you think that.









Should be possible cause the battery only accepts a certain amount of watt.

Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

<https://nl.pcpartpicker.com/list/Qph87R>



Component	Selection	Base	Promo	Shipping	Tax	Price	Where	
CPU	 AMD Ryzen 7 7800X3D 4.2 GHz 8-Core Processor	€598.99	—	—	—	€598.99	amazon.nl (Overridden)	Buy
CPU Cooler	 NZXT Kraken 240 78.02 CFM Liquid CPU Cooler	€129.90	—	Prime	—	€129.90	amazon.nl	Buy
Motherboard	 MSI MAG B650 TOMAHAWK WIFI ATX AM5 Motherboard	€195.00	—	Prime	—	€195.00	amazon.nl	Buy
Memory	 Kingston FURY Beast RGB 32 GB (2 x 16 GB) DDR5-6000 CL36 Memory	€161.83	—	—	—	€161.83	amazon.nl	Buy
Storage	 Samsung 990 Pro 4 TB M.2-2280 PCIe 4.0 X4 NVME Solid State Drive	—	—	—	—	€0.00	Purchased	Buy
Video Card	 Asus TUF GAMING OC GeForce RTX 4070 Ti SUPER 16 GB Video Card	€959.00	—	FREE	—	€959.00	ALTERNATE	Buy
Case	 NZXT H5 Flow (2022) ATX Mid Tower Case	€104.00	—	Prime	—	€104.00	amazon.nl	Buy
Power Supply	 Corsair RM850e (2023) 850 W 80+ Gold Certified Fully Modular ATX Power Supply	€129.99	—	—	—	€129.99	amazon.nl	Buy
						Total: €2278.71	Buy From Amazon Netherlands	

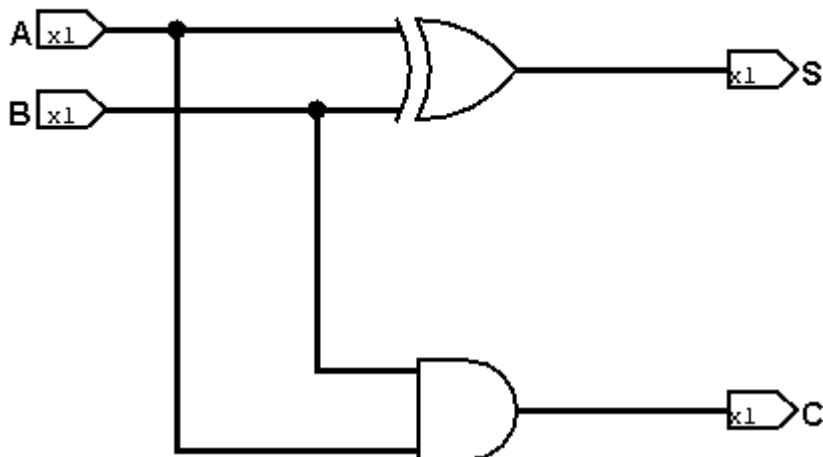
I picked this PC 2 months ago. This is a high end PC and also affordable.

Bonus point assignment – week 3

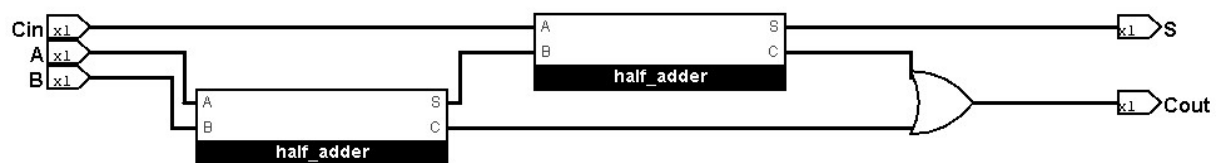
Complete the **half adder**, **full adder** and **4-bit adder** assignment as described in the PowerPoint slides of week 3 in Logisim. Save the chip design and also export three PNG pictures of the separate finished designs. See the PowerPoint slides of week 3.

Paste the three exported PNG pictures in here.

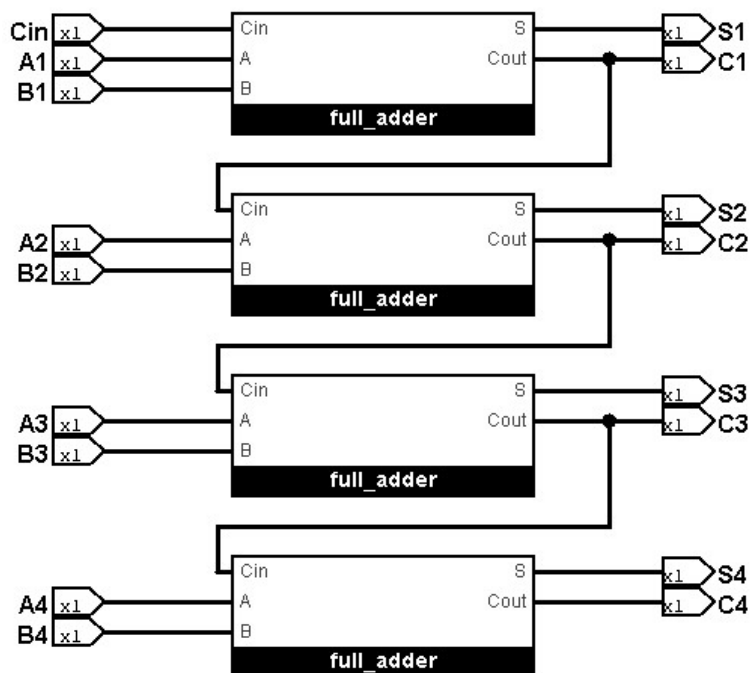
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