Template Week 3 – Hardware

Student number: 589531

Assignment 3.1: Examine your phone

What processor is in your phone?

Apple A15 Bionic chip.

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

ARM-architectuur, specifiek ARMv8-A

How much RAM is in it?

6 GB ram

How much storage does your phone have?

128GB

What operating system is running on your phone?

IOS 26.1

Approximately how many applications do you have installed?

112

Which application do you use the most?

YouTube

Can your phone be charged with what type of plug?

Lightning-kabel

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

Lightning kabel

SIM-Kaart

Luidspreker en microfoon punten

Assignment 3.2: Examine your laptop

What processor is in your laptop?

I5-8250U

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

X86-64

How much RAM is in it?

16GB

How much storage does your laptop have?

1tb HDD – 128GB SSD

Which operating system is running on your laptop?

Win 11

Approximately how many applications do you have installed?

150 ish

Which application do you use the most?

Google Chrome

Can your laptop be charged with what type of plug?

Netadapter

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

1 x USB-C

2 x USB-A

1 x HDMI

1 x 3,5mm audio jack

1 x SD kaartlezer

1 x oplaad poort

1 x Ethernet poort

Assignment 3.3: Power to the laptop

What is the input voltage?

100-240v

What is the output voltage?

19,5V

How many watts can your power adapter deliver?

45W

Is the input voltage AC or DC?

AC

Is the output voltage AC or DC?

DC

AC/DC what is that?

AC = Stroom wisselt hele tijd van richting.,

DC = Stroom gaat maar een richting op.

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

Ja dan word de binnen kant gefrituurd.

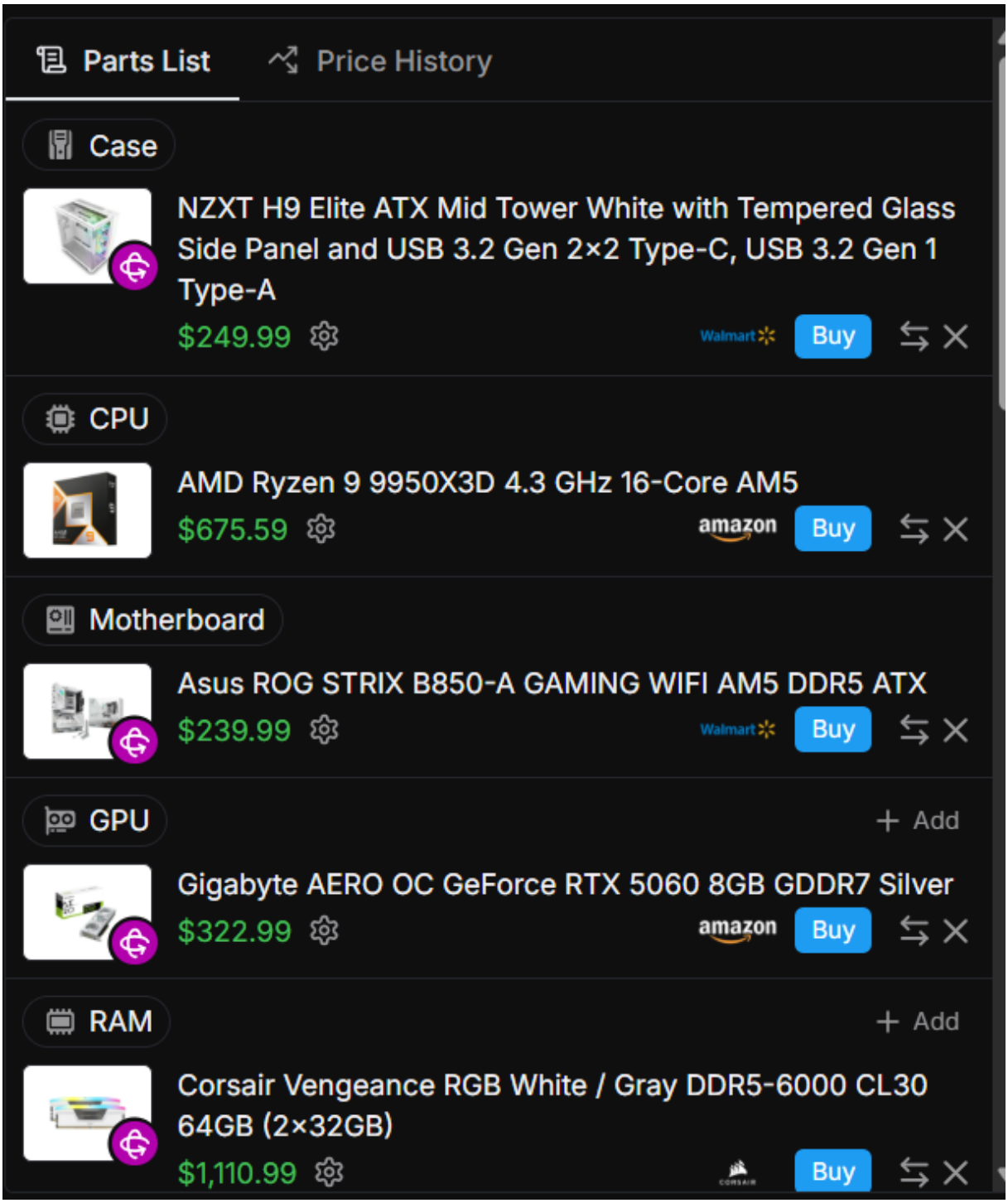
You forgot your power adapter, your laptop normally needs 15 watts. You will be loaned a power adapter that can deliver 50 watts. Voltage, polarity, etc. are all the same compared to the original power adapter. You can connect the borrowed power adapter to your laptop. What will happen? Also explain why you think that.

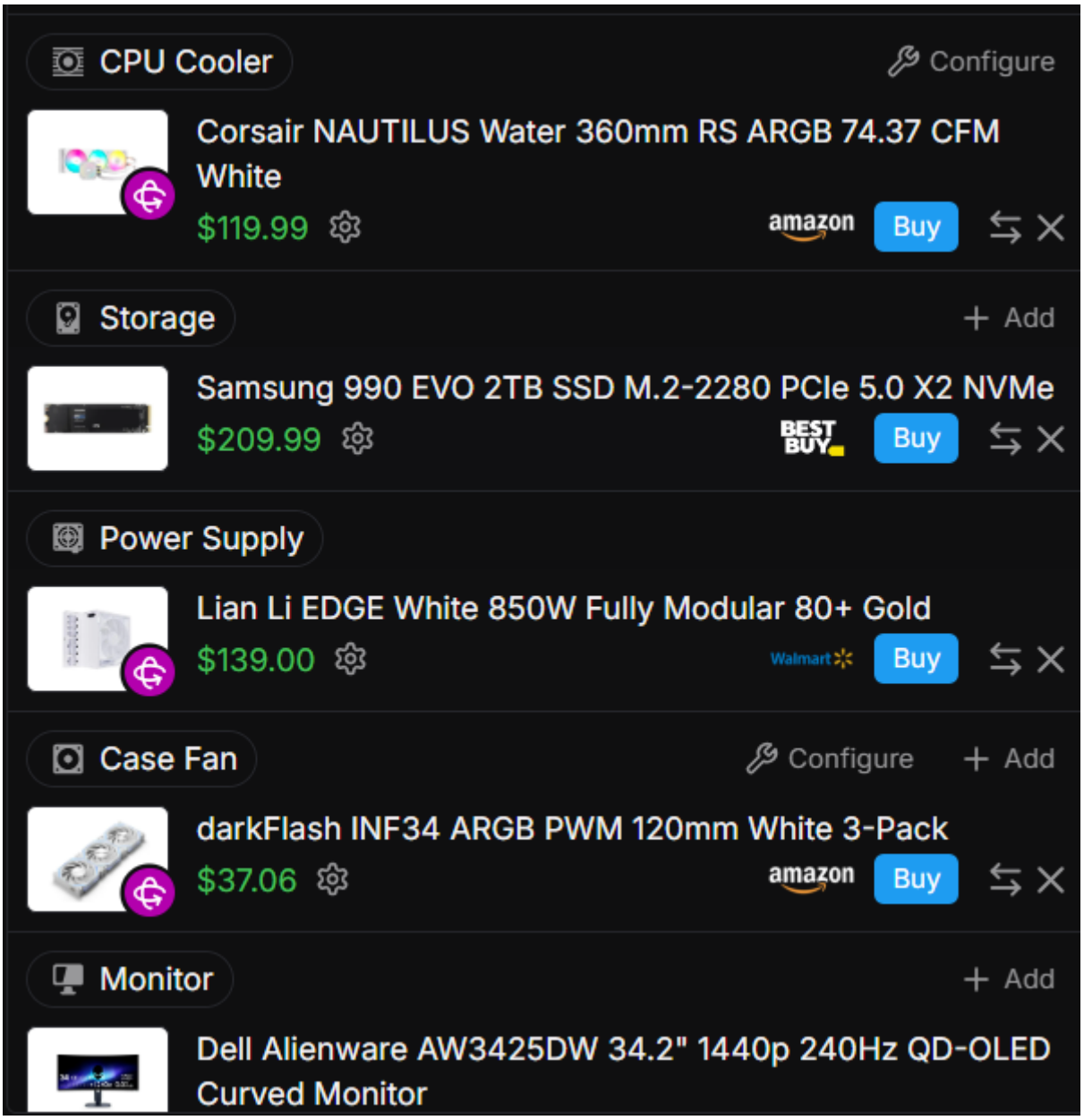
Er gaat niks raars gebeuren de laptop pakt alleen de stroom die die nodig heeft en niet meer.

Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

US$ 4.483,53
Compatible
477,6W
3DMARK 13.994
Share
Link
Image
Markdown
Reddit
Hide 3D
Clone Build
Build Settings
BuildCores
3D models developed by third parties
Accuracy not guaranteed
Case
RGB
View

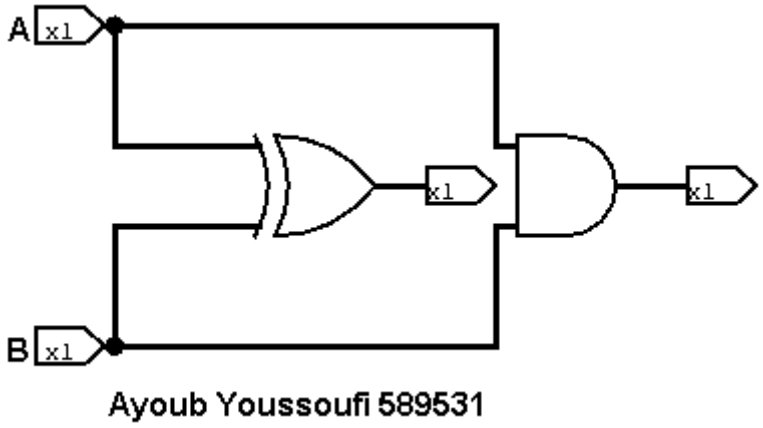

Parts List
Price History
Case
NZXT H9 Elite ATX Mid Tower White with Tempered Glass Side Panel and USB 3.2 Gen 2×2 Type-C, USB 3.2 Gen 1 Type-A
$249.99
Walmart
Buy
CPU
AMD Ryzen 9 9950X3D 4.3 GHz 16-Core AM5
$675.59
amazon
Buy
Motherboard
Asus ROG STRIX B850-A GAMING WIFI AM5 DDR5 ATX
$239.99
Walmart
Buy
GPU
+ Add
Gigabyte AERO OC GeForce RTX 5060 8GB GDDR7 Silver
$322.99
amazon
Buy
RAM
+ Add
Corsair Vengeance RGB White / Gray DDR5-6000 CL30 64GB (2×32GB)
$1,110.99
Buy

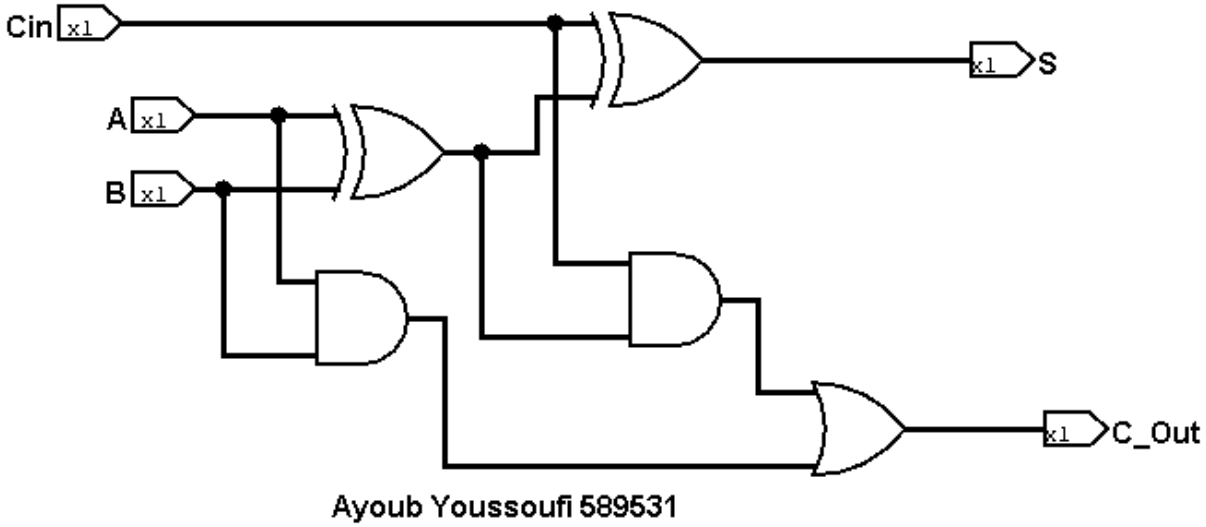

CPU Cooler
Configure
Corsair NAUTILUS Water 360mm RS ARGB 74.37 CFM White
$119.99
amazon
Buy
Storage
Add
Samsung 990 EVO 2TB SSD M.2-2280 PCIe 5.0 X2 NVMe
$209.99
BEST BUY
Buy
Power Supply
Lian Li EDGE White 850W Fully Modular 80+ Gold
$139.00
Walmart
Buy
Case Fan
Configure
Add
darkFlash INF34 ARGB PWM 120mm White 3-Pack
$37.06
amazon
Buy
Monitor
Add
Dell Alienware AW3425DW 34.2" 1440p 240Hz QD-OLED Curved Monitor

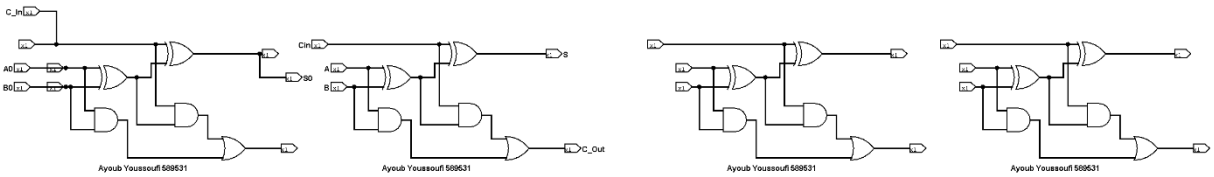
Assignment 3.5: Adders

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.







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