Template Week 3 – Hardware

Student number: 569073

Assignment 3.1: Examine your phone

What processor is in your phone?

Samsung Exynos 1280

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

64-bit RISC-architectuur

How much RAM is in it?

6GB

How much storage does your phone have?

128GB

What operating system is running on your phone?

Google Android 12.0

Approximately how many applications do you have installed?

60

Which application do you use the most?

Clash of clans

Can your phone be charged with what type of plug?

Usb C

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

USB Type-C 2.0

Assignment 3.2: Examine your laptop

What processor is in your laptop?

AMD Ryzen 7 8845HS w/ Radeon 780M Graphics   (3.80 GHz)

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

Zen 4 instruction set architecture

How much RAM is in it?

16,0 GB (15,3 GB usable)

How much storage does your laptop have?

1TB

Which operating system is running on your laptop?

Windows 11 home

Approximately how many applications do you have installed?

50

Which application do you use the most?

chrome

Can your laptop be charged with what type of plug?

DC stekker

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

1x HDMI, 1x USB type-C 3x USB 3.2 1x Ethernet 1Gbps

Assignment 3.3: Power to the laptop

What is the input voltage?

60Wh

What is the output voltage?

60 wat

How many watts can your power adapter deliver?

230W

Is the input voltage AC or DC?

AC

Is the output voltage AC or DC?

AC

AC/DC what is that?

Alternating or direct current

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.

De laptop laad normaal op want de laptop kan niet meer als 15 watts opnemen dus dat gebeurt ook niet
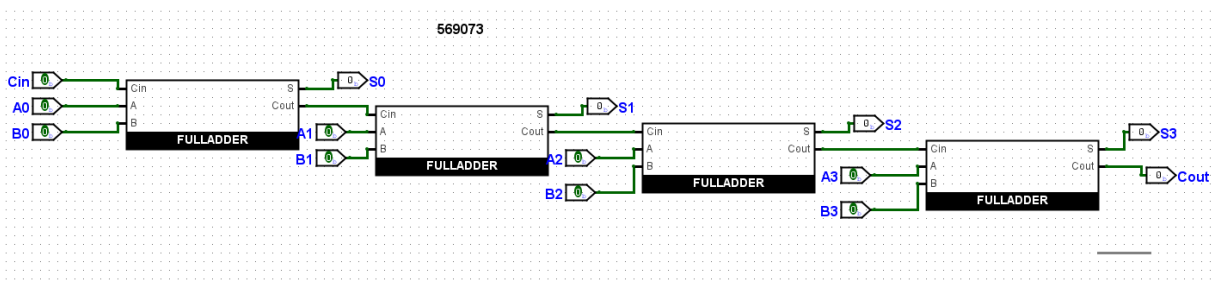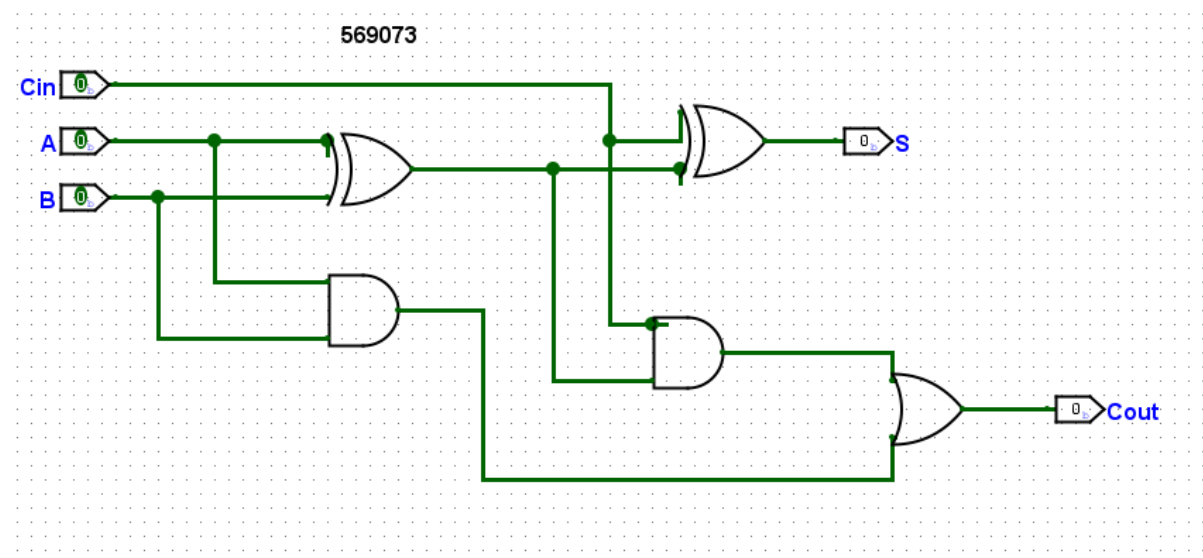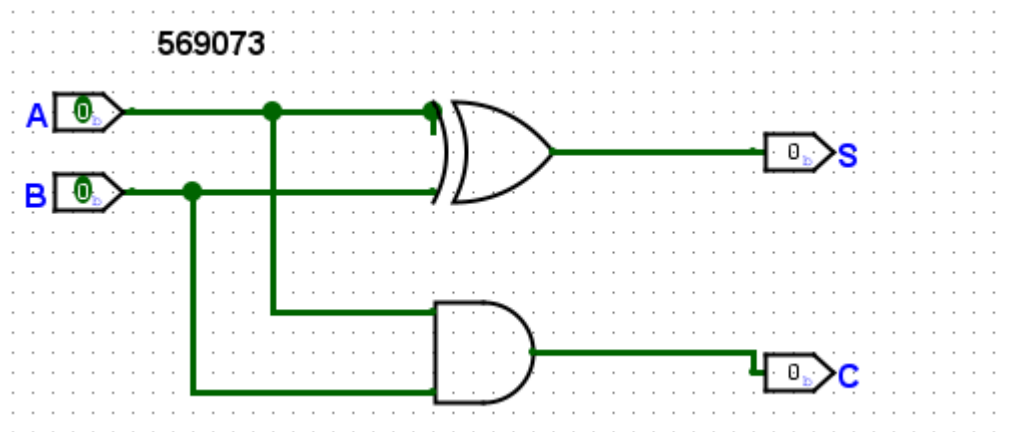
Assignment 3.4: Build your dream PC

Screenshots PC configuration + motivation:

Component	Selection		Base	Promo	Shipping	Tax	Availability		Price	Where		
CPU		AMD Ryzen 7 9800X3D 4.7 GHz 8-Core Processor	€439.00	—	FREE	—	In stock	⚙	€439.00	ALTERNATE	Buy	×
CPU Cooler		Cooler Master Hyper 212 Black Edition 42 CFM CPU Cooler	€46.11	—	—	—	In stock	⚙	€46.11	amazon.nl	Buy	×
Motherboard		Gigabyte B850 AORUS ELITE WIFI7 ATX AM5 Motherboard	€209.00	—	✓Prime	—	Available soon	⚙	€209.00	amazon.nl	Buy	×
Memory		Corsair Vengeance RGB 32 GB (2 x 16 GB) DDR5-6000 CL36 Memory	€402.00	—	FREE	—	In stock	⚙	€402.00	ALTERNATE	Buy	×
+ Add Additional Memory												
Storage		Samsung 990 Pro 4 TB M.2-2280 PCIe 4.0 X4 NVME Solid State Drive	€289.00	—	✓Prime	—	In stock	⚙	€289.00	amazon.nl	Buy	×
+ Add Additional Storage												
Video Card		Gigabyte WINDFORCE OC SFF GeForce RTX 5080 16 GB Video Card	€1069.00	—	FREE	—	In stock	⚙	€1069.00	AZERTY	Buy	×
+ Add Another Video Card												
Case		Corsair 3500X ARGB ATX Mid Tower Case	€104.90	—	✓Prime	—	In stock	⚙	€104.90	amazon.nl	Buy	×
Power Supply		MSI MAG A850GL PCIE5 850 W 80+ Gold Certified Fully Modular ATX Power Supply	€119.00	—	✓Prime	—	In stock	⚙	€119.00	amazon.nl	Buy	×
Operating System		Microsoft Windows 11 Home OEM - DVD 64-bit	€125.00	—	FREE	—		⚙	€125.00	PARADIGIT	Buy	×
Monitor		MSI MAG 275QF 27.0" 2560 x 1440 180 Hz Monitor	—	—	—	—		⚙	No Prices Available	—	Buy	×
+ Add Another 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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Ready? Save this file and export it as a pdf file with the name: **week3.pdf**