**LAB\_1**

1. Find a link with a video of the disassembly and reassembly of a desktop.

<https://www.youtube.com/watch?v=EJemXALSE6U>

1. Find a link with a video of the disassembly and reassembly of a laptop.

<https://www.youtube.com/watch?v=4IJnGP0vS94>

1. List all different ports you may find on a computer: desktop and laptop.

* HDMI
* RCA
* USB-A, USB-B, USB-C, USB 2.0, USB 3.0
* 3.5mm audio
* Ethernet
* SD card reader
* Micro SD reader
* DisplayPort
* DVI-D
* Sound ports
* PS/2 keyboard/mouse combo port
* SATA
* IDE connectors

1. Using the System Information Utility to Gather Information about your System:

Use the **msinfo32.exe** command to launch the System Information window.

Browse through the different levels of information in this window and answer the following questions:

1. What OS and OS version are you using? Microsoft Windows 11 Home
2. What is your CPU speed? 1300 Mhz
3. What is your BIOS manufacturer and version? LENOVO LTCN26WW
4. How much video RAM is available to your video adapter card? Explain how you got this information. Intel® Iris® Xe Graphics; 8166 MB.

How to find it:

1. Press Window key + R, which opens the Run prompt. Enter “dxdiag”
2. Click on the Display tab, look for memory
3. What is the name of your driver file that manages your network adapter? INTEL® Wi-Fi 6 AX203
4. What is the name of your driver file that manages your optical drive? My laptop does not have an optical drive
5. Device Manager is your primary Windows tool for managing hardware.

Its program file is named **devmgmt.msc**. It lists all installed hardware devices and the drivers they use.

1. Using the Device Manager, find out how much memory the Display Adapter has. 8166 MB
2. What can you do using Device Manager? You can manage hardware devices on your computer
3. Search the internet for an updated driver on all your installed devices. Which devices did Windows find newer drivers for? Non
4. You are designing a desktop system and your friend has offered to sell you his unused

**Core i5-14500T** at a reduced price. Research the processor and possible motherboards that will support it and answer the following questions;

1. What is the best online price you can find for this processor? $239.99

<https://www.bhphotovideo.com/c/product/1802187-REG/intel_bx8071514500_ic_i5_14500_desktop_processor14.html?ap=y&smp=y&srsltid=AfmBOoouNqoRuUVFAiwhFM-kjoi0gJpPu8Bb1zxbIOO-PM-oX9L6oydlioQ>

1. What socket does the processor use? LGA1700
2. Find one motherboard that supports this processor. Which chipset does the board use?

Intel Z790 <https://www.newegg.ca/msi-z790-gaming-pro-wifi/p/N82E16813144629>

1. Does the board require a firmware update to use this processor? No
2. Intel offers two utilities you can download and run to identify an installed Intel processor or chipset.
3. Download and run the Processor Identification Utility available at:

*downloadcenter.intel.com/download/7838*

What is the information of your processor?

A screenshot of a computer

Description automatically generated

1. Download and run the Chipset Identification Utility available at:

*downloadcenter.intel.com/product/2715/Intel-Chipset-Identification-Utility*

What is the information of your chipset ?

Websites change often, so if these links don’t work, try searching the Intel website for each utility.

I can’t seem to find the chipset identification utility anywhere

1. Intel provides an extensive database of all processors, chipsets, motherboards and other products at **ark.intel.com.** Research the database and answer these questions:
2. List three 10th generation Core i7 processors. For each processor, list the processor number (model), the maximum memory it supports, the PCI Express version it supports and the socket it uses.

* [Intel® Core™ i7-10870H Processor](https://ark.intel.com/content/www/us/en/ark/products/208018/intel-core-i710870h-processor-16m-cache-up-to-5-00-ghz.html)
  + i7-10870H
  + 128 GB
  + 3.0
  + FCBGA1440
* [Intel® Core™ i7-10610U Processor](https://ark.intel.com/content/www/us/en/ark/products/201896/intel-core-i710610u-processor-8m-cache-up-to-4-90-ghz.html)
  + i7-10610U
  + 64 GB
  + 3.0
  + FCBGA1528
* [Intel® Core™ i7-10810U Processor](https://ark.intel.com/content/www/us/en/ark/products/201888/intel-core-i710810u-processor-12m-cache-up-to-4-90-ghz.html)
  + i7-10810U
  + 64 GB
  + 3.0
  + FCBGA1528

1. List three motherboards for desktops: an ATX board, a microATX board and a mini-ITX board.

For each motherboard, list the processor socket it provides, the chipset it uses, the maximum memory it supports.

\*\*I used newegg.ca for the information\*\*

* ASRock B760 Pro RS LGA 1700 DDR4 ATX motherboard
  + LGA 1700
  + Intel B760
  + 128 GB
* ASRock B550M PRO4 AM4 AMD B550 SATA 6Gb/s Micro ATX AMD Motherboard
  + AM4
  + AMD B550
  + 128 GB
* ASRock Z690M-ITX/ax LGA 1700 (14th,13th,12th Gen) Intel Z690 SATA 6Gb/s DDR4 Mini ITX Intel Motherboard
  + LGA 1700
  + Intel Z690
  + 64 GB

1. The Z690 chipset is designed for gaming computers. What Intel generation is the chipset ?

How many displays does the chipset support ?

* 12th Gen Intel® Core
* 4 DIsplays