

**Semester I 2020/2021**

Subject : Technology and Information Systems (SECP1513)

Section : 11 .

Task : Step by step PC Assembly.

Assignment has been done by : Group 7.

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Page 2

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Assignment : Step by step PC Assembly

**GROUP NAME / NUMBER : \_\_\_\_\_**

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## FORMAT OF REPORT

**PART A – List at least FOUR tools needed to assemble a PC. For each tool, Provide picture(s), explanations of its functions and its importance.**

### 1.0 Screwdrivers



One of the most essential tools for PC assembly. Computers are held together with screws and, luckily, almost all types of screws used in computer are Phillips-head. A long shaft also aids in keeping the handle out of the way when working in tight spaces.

2.0 Anti-static [ ESD] safe discharge wristband wrist strap band grounding cord tool.



An anti-static wrist strap is a significant aspect of safety equipment that helps prevent the build-up of static electricity in the area of sensitive electronics or trigger safety problems. With an anti-static mat or other kind of workspace covering, the wrist brace is also used. By grounding our body with an antistatic wrist strap, any remaining static charge in our body will dissipate instantly.

3.0 Thermal Paste



Thermal paste is a silvery-gray substance that you apply to a processor before installing a cooling solution. It allows for an efficient transfer of heat from the IHS of the processor to the base plate or water block of the CPU cooler that is designed to dissipate that heat.

#### 4.0 Cable ties



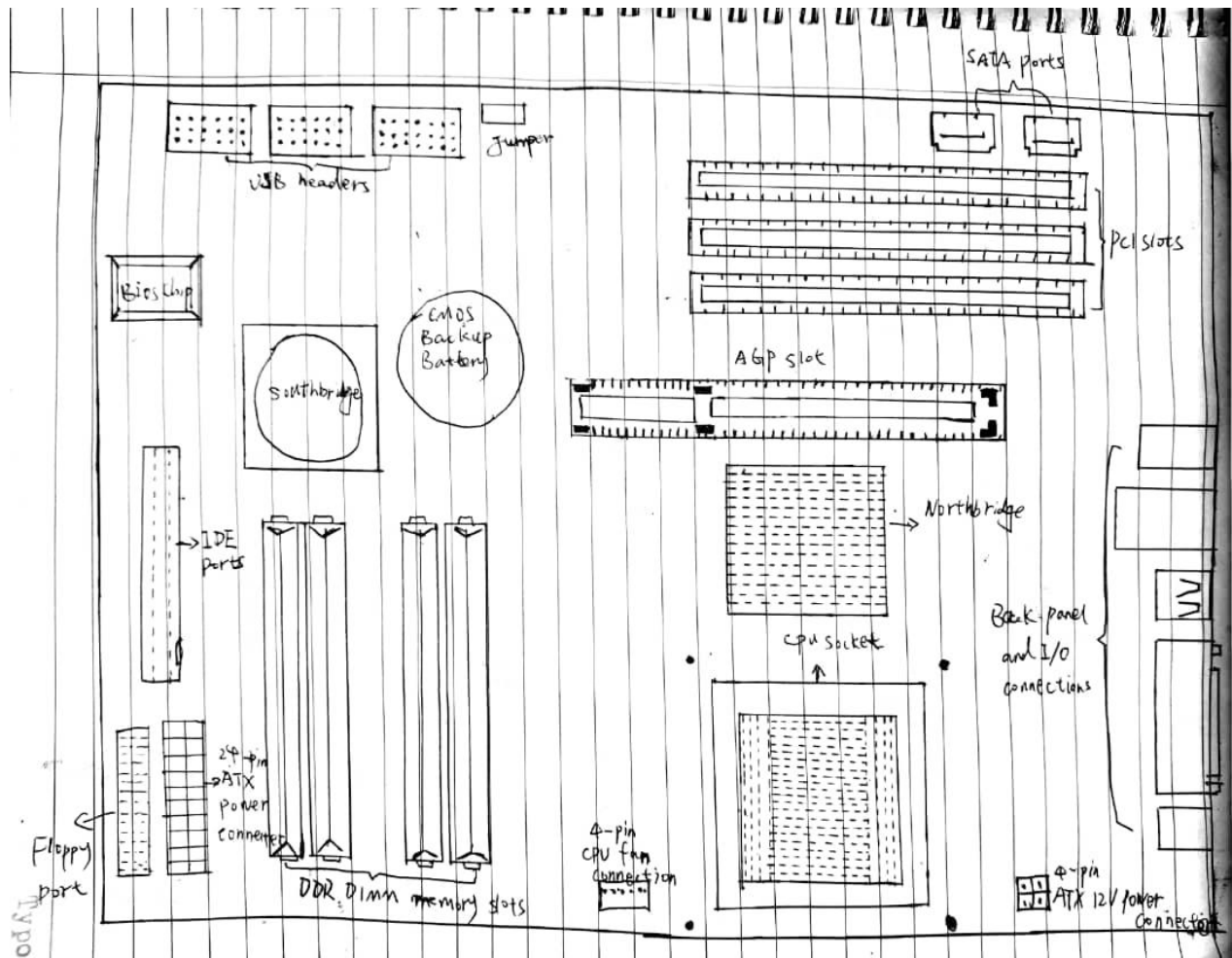
They are fasteners that bundle your cables and wires together to keep them organized and prevent damage. They come in different sizes, lengths, materials and even colors. The most common cable tie consists of a flexible nylon tape with an integrated gear rack, and on one end a ratchet within a small open case. Once the pointed tip of the cable tie has been pulled through the case and past the ratchet, it is prevented from being pulled back; the resulting loop may only be pulled tighter.

#### 5.0 Canless Air Duster.



Canless air duster air is used to blast dust out of our computer's nooks and crannies. Never blow with lips into a computer to remove dust because there is so much moisture in our breath. Also, we cannot use a home vacuum cleaner nozzle to clean the inside of a computer. They're producing too much static.

## **PART B – Sketch of a mother board layout**



## PART C - "Step by Step PC Assembly"

### STEP 1 (mount processor)







**- Locate the socket holder for the CPU on the motherboard.**

**- lift the latch lever to unlock and hinge the CPU socket cover pen.**



**1- Holding the CPU its side**

**2- To ensure the right orientation, line up any alignment notches or the triangle at the CPU corner to the triangle indicated on the motherboard.**

**3- Place it gently straight into the motherboard socket to seat the CPU.**

**\*Precaution:**

**- Do not apply force to the CPU to seat**

**- As any residue from your hands will destroy the heat transfer surface, so avoid touching the back of the CPU**

**1) Lower the cover of the Processor socket over the CPU.**

**2) Lower the latch lever to lock the closed CPU socket holder.**

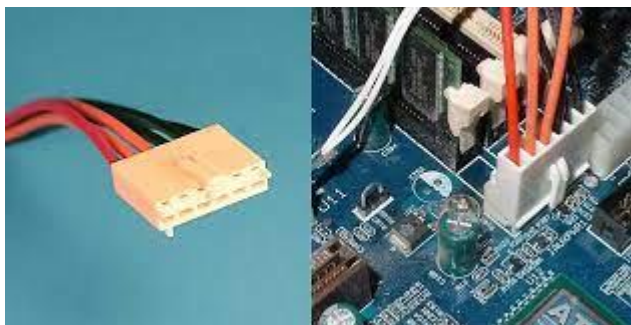
## **-STEP 2 (INSTALL CPU COOLER)**



**Apply thermal paste if available on the surface of CPU.**



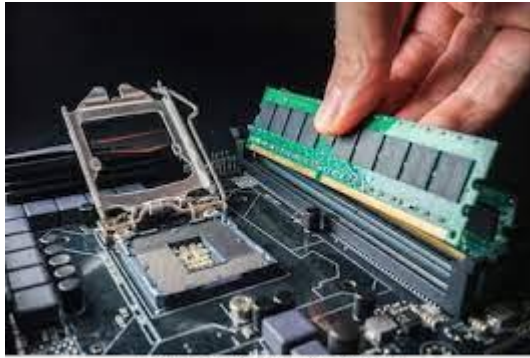
**Sit the heatsink/cooler of the CPU and fixed in position.**



**Plug the power cable that attached to the heatsink into the motherboard connector.**

## **-STEP 3 (INSTALL RAM)**





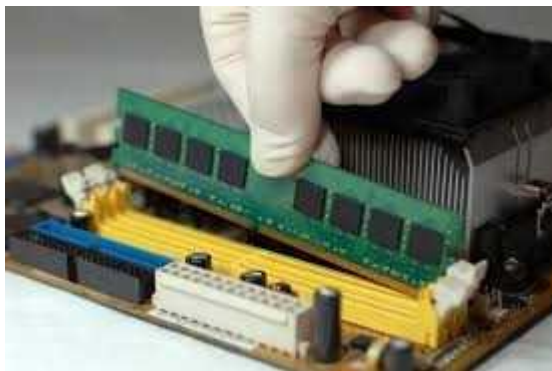
**Press to open the clips on both ends of the RAM mounting slot.**



- 1- seat the RAM into the slots**
- 2- line up the notch of the RAM stick with the mounting slot.**

**\*Precautions : Never touch the golden electrical component on the stick because it might damage the RAM.**

**-Press it firmly to the slots**



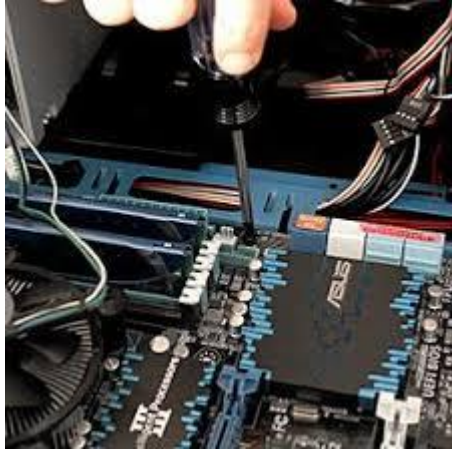
**Close the clips at both ends of the RAM mounting slot and ensuring that it is correctly aligned.**

## **STEP 4 Install power supply**



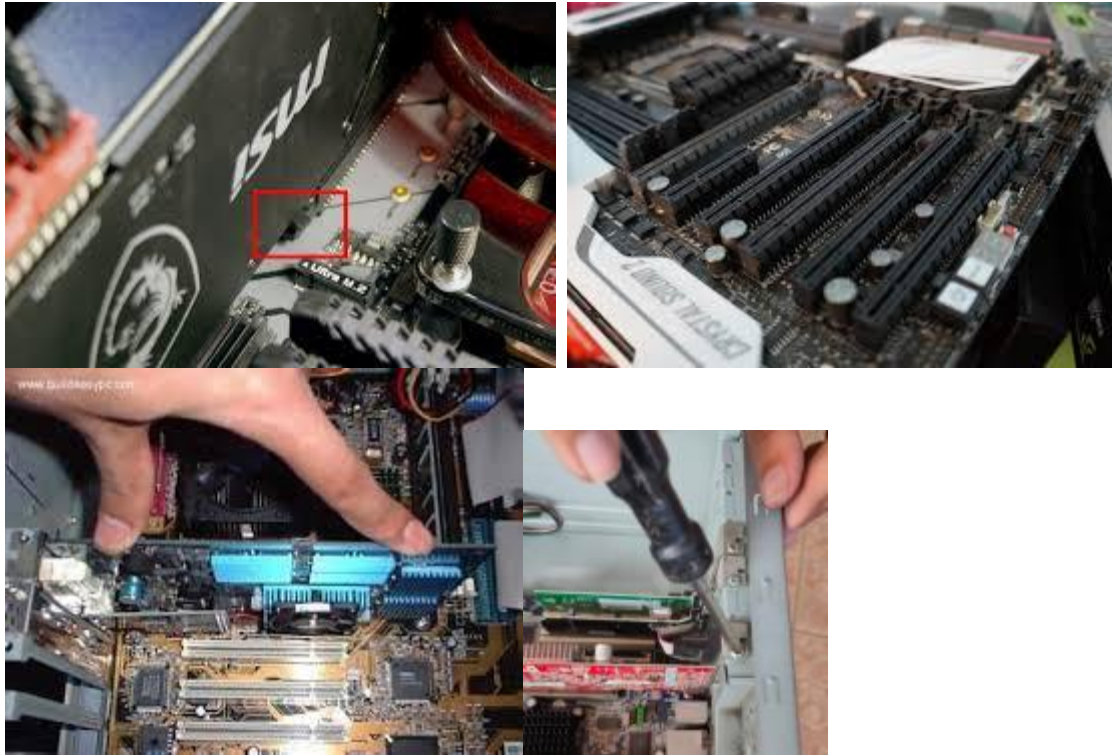
- 1)Mount the power supply at the top corner on the PC part**
- 2)Screw it to the case mounting parts**

## **STEP 5 Install motherboard**



- 1)Mount the motherboard into the PC case**
- 2)Screw the motherboard into the case**
- 3)cabling to the motherboard power connector**
- 4)Connect a 4 pin-cabling connector from power supply cabling into the CPU power connector beside the heatsink**

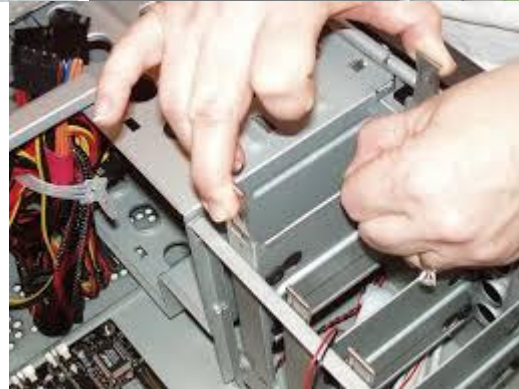
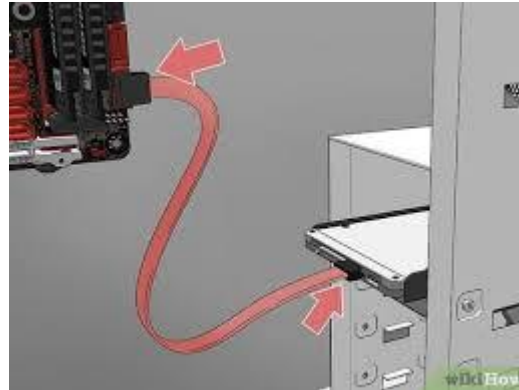
## **STEP 6 Install graphics card**



- 1) **Connect the graphics card slot to the motherboard.**
- 2) **Line it up and press down to set the card.**
- 3) **3)Then screw the graphic card to the side of pc case to keep it in place.**

## **STEP 7 Install hard disk**





- 1) Mount storage drives in the case drive bays
- 2)Screw through the case frame in the case of the mounting holes on the storage drives
- 3)Connect the IDE cable into the connection port on hard disk
- 4)Connect the drives to the motherboard by using IDE cable
- 5)Plug in power cabling from power supply to the hard disk

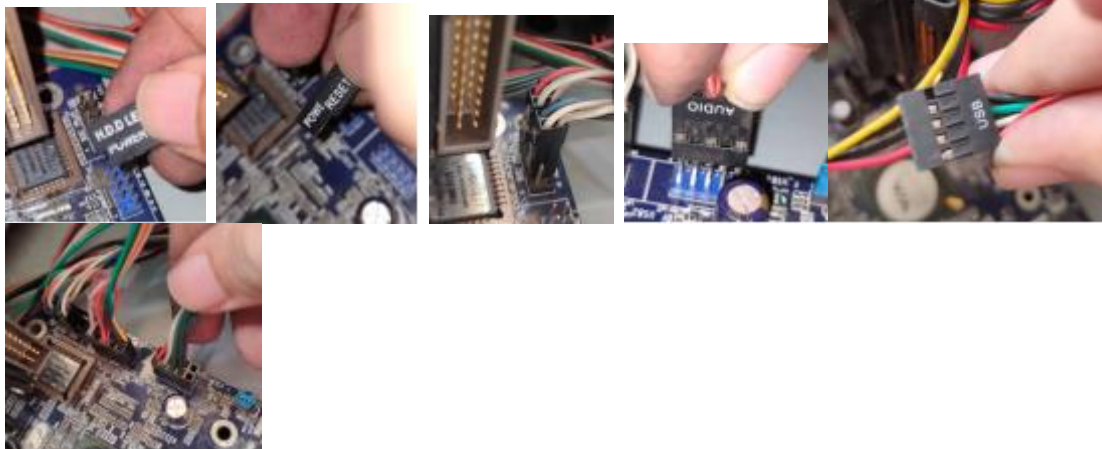
## STEP 8 Install CD-ROM/Optical drive





- 1) Remove the front panel from the computer case
- 2) Place the optical drive into the case and close the front panel
- 3) Screw through the case frame in the case of the mounting holes on the optical drives
- 4) Plug in power cabling from power supply to the optical drives
- 5) Connect the IDE cable into the connection port on optical drives
- 6) Connect the optical drives to the motherboard by using IDE cable

## **STEP 9 Connect USB cable**



- 1) Connect the front panel connectors (HDD LED, POWER LED, RESET SW, POWER SW) to the motherboard front panel I/O headers
- 2) Connect front panel audio connectors to the motherboard front audio header
- 3) Connect front panel USB connectors to the motherboard USB headers

## **STEP 10 Closing the case and connecting peripherals**





- 1)Attach the monitor cable to the video port.Secure the cable by tightening the screws on the connector**
- 2)Plug the keyboard cable into the PS/2 keyboard port.Plug the mouse cable into the PS/2 mouse port**
- 3)Plug the network cable into the network port**
- 4)Plug the power cable into the power supply**

