UTM UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
Faculty of Engineering

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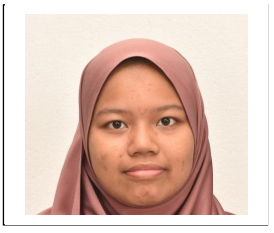
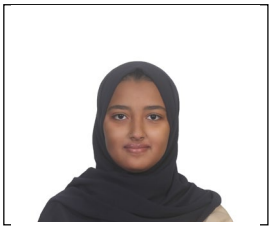
Subject : Technology and Information Systems

(SECP1513) Section: 03

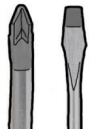
Assignment : Step by step PC Assembly

GROUP NAME / NUMBER: 4

1	Photo 	Name :Kalaivani A/P Subramaniam Matric Number : A20EC0056 Phone Number : 0137202005 E-mail : kv18733@gmail.com
2	Photo 	Name : Tan Ming Hui Matric Number : A20EC0155 Phone Number : 0126548511 E-mail : minghui@graduate.utm.my
3	Photo 	Name : Tay Jia Yi Matric Number : A20EC0158 Phone Number : 01110920624 E-mail : tayyi@graduate.utm.my
4	Photo 	Name : Nur Fatehah Bt Hairol Nizam Matric Number : A20EC0113 Phone Number : 0177470649 E-mail : fatehah01@graduate.utm.my
5	Photo 	Name : Salma Alaa Mohamed Mahmoud Matric Number : A20EC0283 Phone Number : 01128622463 E-mail : salma.selim786@gmail.com

PART A

1.0 Magnetic tip screw driver



A screwdriver is an essential item to have because you would need to fit all the screws manually when building a PC. A 10-inch-long one is much preferable as it will ease the process of fitting the screws in deeper places inside the PC, it also allows you to stand in a comfortable position while working instead of bending over when placing the screws in place. In addition, the magnetic tip is an essential feature as it helps keep the screw in place when you lower it in the system, moreover if a screw ever drops you can easily pull it out with the magnetic tip. You can either use a Philip head or a flat head screwdriver depending on the screws you are using.

2.0 Magnetic parts tray

A magnetic parts tray is important as it will help keep all the screws and additional metal parts in place while building the PC, it will also keep the screws in place if the tray ever falls by mistake while working.

3.0 Cable ties

Cable ties are important as they would help you properly manage and arrange the cables of the PC. They will keep the PC neat from the inside and will give you extra space to work with.

4.0 Side cutters

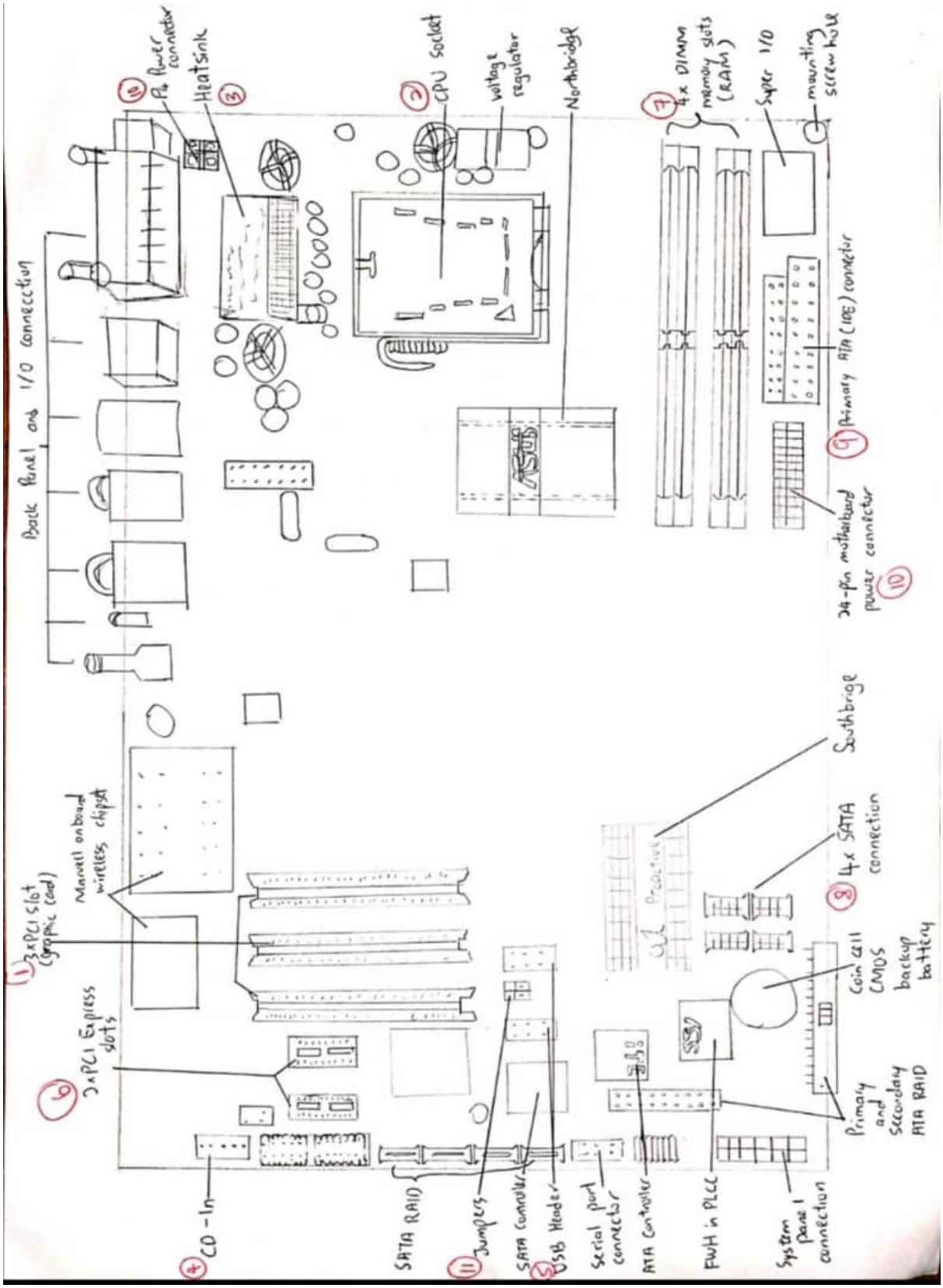
These will help you cut off the extra length of the cable ties after wrapping up the cables. This step is important as it will prevent the extra length of the ties from getting into the fans or touching any other element inside the PC.

5.0 Anti-static strap

This is by far the most important tool to have. There are always static charges on your body, in fact a human body contains more static charges than that on the sensitive parts of the PC, and if you didn't ground yourself and before touching these parts they will be destructed. This tool helps you ground yourself and get rid of all charges while building the PC. You would first need to plug the power supply of the pc to the wall, and then connect this strap to the power supply and wear it on either your wrist or feet.

PART B:

1.0 Sketch of a mother board layout



2.0

1. Graphic Card

Function:

A Graphics Card is a piece of computer hardware that produces the image you see on a monitor. The Graphics Card is responsible for rendering an image to your monitor, it does this by converting data into a signal your monitor can understand.

Examples of models:

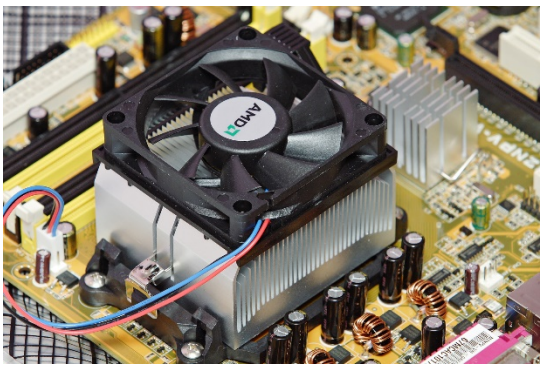
2. CPU/Processor

Function:

Microprocessor or the processor, the CPU is the computer's brain since it works the hardest. It is responsible for fetching, decoding, and executing program instructions as well as performing mathematical and logical calculations. A CPU does all the calculations needed for a system and varies in speed. The CPU generates heat, and that’s why a fan is installed inside the PC. More powerful CPU’s are required for intense computer work or work that necessitates programming multifaceted software or editing high-definition video.

Examples of models:

3. Heat sink



Function:

In computers, heat sinks are used to cool CPUs, GPUs, and some chipsets and RAM modules. Thermal adhesive or thermal paste improve the heat sink's performance by filling air gaps between the heat sink and the heat spreader on the device. A heat sink is usually made out of aluminum or copper.

Examples of models:

4. CD Rom

Function:

CD-ROM stands for Compact Disc Read Only Memory. It functions as a compact disc that stores computer data of graphics, text, and audio. They are popular for software and other multimedia applications. CD-ROMs can store up to 700MB of data.

Examples of models:

5. USB Cable

Function:

USB (Universal Serial Bus) is the most popular connection used to connect a computer to devices such as digital cameras, printers, scanners, and external hard drives. USB is also “plug and play”. When you connect a USB device to your PC, Windows should detect the device and even install the drivers needed to use it.

Examples of models:

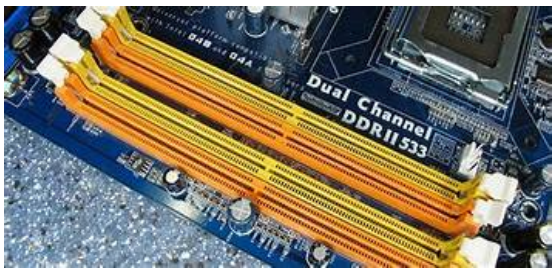
6. Slots (IDE/PC)

Function:

In computers, a slot, or expansion slot , is an engineered technique for adding capability to a computer in the form of connection pinholes (typically, in the range of 16 to 64 closely-spaced holes) and a place to fit an expansion card containing the circuitry that provides some specialized capability, such as video acceleration, sound, or disk drive control. Almost all desktop computers come with a set of expansion slots. These help ensure that you'll be able to add new hardware capabilities in the future.

Examples of models:

7.0 RAM (Random-Access Memory)



Function:

To act as a temporary storage of data and program instructions that can be accessed quickly by the CPU when required.

Examples of models:

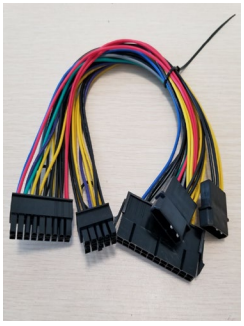
8. SATA (Serial Advanced Technology Attachment)

Function:

To connect ATA hard drives to a computer's motherboard. SATA cable used to bridge the gap between the drive and the computers motherboard and a separate cable is used to provide power to the drive.

Examples of models:

9. IDE (Integrated Drive Electronics)



Function:

Allow programmers to develop programs more efficiently. IDE cable connects a hard drive or CD drive to the main board of the computer. Integrated Drive Electronics (IDE) is a standard interface for connecting a motherboard to storage devices such as hard drives and CD-ROM/DVD drives. In older motherboards, there used to be 2 IDE channels where drives were

connected via a ribbon cable. Each cable carries 2 devices. There is an integrated disk drive controller on the motherboard for controlling the flow of informing from the drive to the motherboard and vice versa.

Examples of models:

10. Power supply


Function:

Convert AC to DC. Provide DC voltage to the motherboard, adapters, and peripheral devices. Provide cooling and facilitate air flow through the case.

Examples of models:

11. Hard disk

Function:

Used to store data long term. Jumper allow the computer to close an electrical circuit, allowing the electricity to flow on a circuit board and perform a function.

PART C