WEEK 1.2

BUILDING A PC

WELCOME TO THE FIRST COMP1587 LABORATORY

Before getting into the details of communications, it is important that we become familiar with the physical architecture of a typical PC.

🕘 You have **90 minutes** to complete the 12 steps.
In the final 30 minutes your tutors will test the PC that you built and mark you.

1. Form **groups of four**

2. Make sure you have all the components. If not, go back to the technicians' counter.

- ☐ Intel motherboard
- ☐ CPU
- ☐ CPU Fan
- ☐ RAM Module
- ☐ Hard Drive
- ☐ Two SATA cables
- ☐ Anti Static Mat and Wrist Strap (already on the table)

3. **Static Precautions**

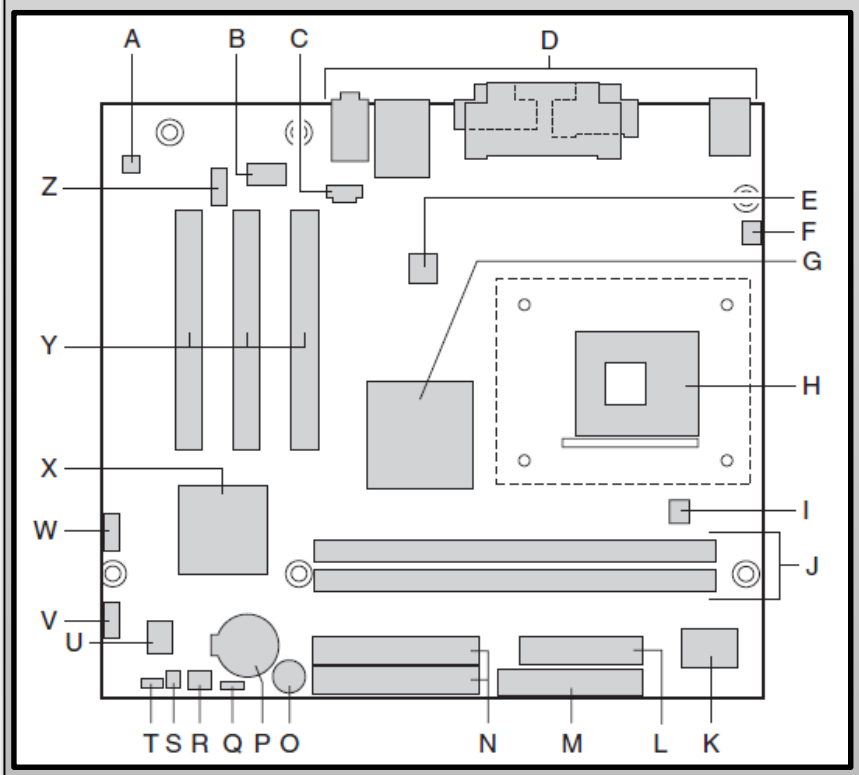
☐ Place the components on the anti static mat.

☐ Put on the anti static wrist strap and connect the mat and wrist strap to the yellow anti static plug.

☐ Plug the anti static system into the bench's power socket, ensuring the power socket is switched to off.

4. **Connect the power supply** to the motherboard's Power Connector (page 2: L) and connect the power supply to the motherboard's +12 V ATX Power Connector (page 2: E).

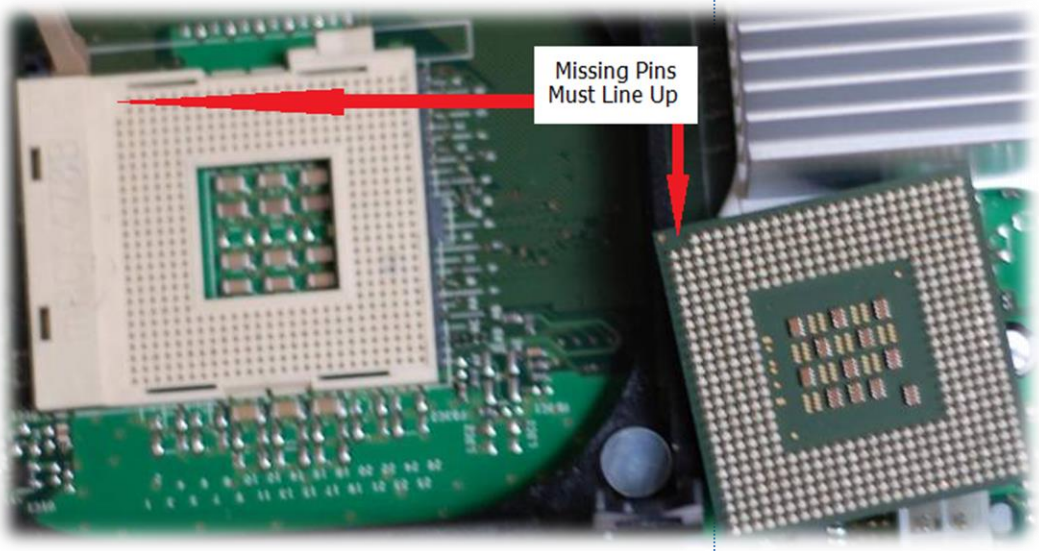
A	Audio Codec	N	Integrated Drive Electronics (IDE) Connectors
B	Intel 82562ET 10/100 Mb/s Programmable Logic Controller (PLC)	O	Speaker
C	Advanced Technology Attachment with Packet Interface (ATAOI) CD-ROM connector	P	Battery
D	Back Panel Connectors	Q	Auxiliary Front Panel Power Light Emitting Diode (LED) Connector
E	+12 V Advanced Technology eXtended (ATX) Power Connector	R	Front Chassis Fan Connector
F	Rear Chassis Fan Connector	S	Chassis Intrusion Connector
G	Intel 82845GL Graphics and Memory Controller Hub (GMCH)	T	Basic Input/Output System (BIOS) Setup Configuration Jumper Block
H	mPGA478 Processor Socket	U	4 Mb Firm Ware Hub (FWH)
I	Processor Fan Connector	V	Front Panel Connector
J	Dual In-line Memory Module (DIMM) Sockets	W	Front Panel Universal Serial Bus (USB) Connector
K	Input/Output (I/O) Connector	X	Intel 82801DN I/O Controller Hub (ICH4)
L	Power Connector	Y	Peripheral Component Interconnect (PCI) bus add-in card connectors
M	Diskette Drive Connector	Z	Front Panel Audio Connector



The exercise is based on the Intel D845GLVA motherboard. Yours may differ a bit.

5. **Install the Central Processing Unit (CPU)**
Pull the ‘metal arm’ by the CPU socket to it's upright position.
Line up the missing pins on the CPU and the socket. Once aligned, the CPU should just drop into place.
When the CPU is fitted, push the lever down to create a connection with the CPU pins.

Do not use force under any circumstance. You may damage the CPU or motherboard



6. **Install the CPU fan**
The fan has plastic hooks which fasten to the base of the CPU socket. The levers should be pulled up and each of the four legs should be clicked over the corner of the base. The levers should then be pushed down.

If the fan is not fixed solidly onto the CPU, it will wobble. Make sure all four legs are attached firmly.

7. **Install the RAM**
The RAM should be fitted into the DIMM Socket 1 that is the closest to the CPU.

Slot in the RAM by pushing the white levers outwards.

Inserting RAM requires a firm but not excessive push. Make sure the notch on the module is aligned correctly with the socket and both levers are moved completely to the upright position

8. **Install the Hard Drive**

☐ Connect the hard drive with an IDE cable to motherboard's IDE 1 socket (N) - black socket.

☐ Connect the hard drive to the PC's power supply.

9. **Connect the peripherals**
☐ Monitor
☐ Keyboard
☐ Mouse

10. **Set the BIOS** to 1st boot device C:

11. **Turn the machine on**. The machine should boot up into the Windows XP operating system

As there is no button to turn the machine on, you will need to bypass this using a jumper (use keys or a screwdriver to touch the two pins with the red background)

12**.** Use XP's Disk Management to **partition** 75% of the remaining disk space to drive D: and 25% to drive E:

You have 90 minutes to complete the 13 steps, fill in the marking scheme and print it. You can then call the tutor to come to test your PC and mark you.
*Print only one marking scheme for the whole team, but **all** members need then to **convert it into PDF format** and upload it into **week 1.2** individually. Even for your individual uploads, make sure you include all members of your team on your marking scheme.*