ANNEX A · CABLING A LAN

Name _____ **Group** _____ **Date** _____

T568B — the order you need today. Hold the plug with the **clip down** and the **gold contacts up**, cable towards you. Pin 1 is on the left.

1	2	3	4	5	6	7	8
white-orange	orange	white-green	blue	white-blue	green	white-brown	brown

TASK 1 · MAKE ONE PATCH CABLE (ALONE)

1. Strip about 2.5 cm of the outer jacket. Do not cut into the wires inside.
2. Untwist the four pairs and straighten the eight wires. Put them in T568B order, flat, between thumb and finger.
3. Cut them straight, about 13 mm from the jacket. Do not untwist more than that.
4. Push the wires into the plug until you see eight copper dots at the front. The jacket must be inside the plug.
5. Read the colours through the plastic, left to right. Correct? Crimp once, hard.
6. Do the same on the other end. Test the cable with the cable tester.

Tester result — tick the lights that came on, in order, on the far box: 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Number of plugs I needed: _____ What went wrong the first time: _____

`DONE WHEN` the tester shows 1 to 8, one by one, in the same order on both boxes. Label the cable with your name.

Extra. Test the teacher's mystery cables. Which one is faulty and why? X: _____ Y: _____ Z: _____

TASK 2 · CABLE YOUR GROUP'S LAN (GROUPS OF 3)

1. Unplug your PC from the wall socket. Plug it into your group's router with a cable you made: student A → `ether2`, B → `ether3`, C → `ether4`. Leave `ether1` empty and label it WAN.
2. On your PC, open a terminal:

```
ip -br link
cat /sys/class/net/NAME/speed
```

Write `NAME` as the wired interface from the first command (it starts with `en`).

My wired interface is called _____

Does it show `LOWER_UP`? What does that mean? _____

Speed (Mbit/s) _____

Does my PC have an IP address now (`ip -br address`)? Why? _____

3. Draw the **physical map** of your group's LAN: router, ports, cables, PCs, who sits where.

Physical map

DONE WHEN the three port lights are on, every PC shows `LOWER_UP`, and the map has the port numbers on it.

EXIT TICKET (ALONE, NO NOTES)

1. In T568B, pins 1 and 2 are:
   A · white-green, green B · white-orange, orange C · white-blue, blue D · white-brown, brown
2. The wires are twisted in pairs because:
   A · it makes the cable stronger B · it makes the signal travel faster
   C · the noise affects both wires equally and cancels out D · it saves copper
3. The cable links, but at 100 Mbit/s instead of 1000. The most likely cause:
   A · only two of the four pairs make contact B · the cable is Cat 6
   C · the cable is a crossover D · the PC has no IP address
4. The maximum length of one copper Ethernet link is: A · 10 m B · 100 m C · 500 m D · 1 km