ANNEX A · PRACTICAL 2.1 · COMPARING OPERATING SYSTEMS

Name: _____ **Date:** _____

Hand in: this sheet, today at the end of the class (latest: Friday 23/10 at the start of the class). **Mark:** part A 4 points · part B 3 points · part C 3 points. Late: 5 at most. More than 48 hours late: 0. Sources: official pages only.

TASK A THE COMPARISON TABLE

28 min · alone · 4 points

Fill in the table from the **official** pages: `microsoft.com/windows/windows-11-specifications` · `documentation.ubuntu.com/release-notes/26.04` · the Debian 13 installation guide for amd64 on `debian.org` (section 3.4) · `support.apple.com` (search: macOS 27 compatible computers).

System	Made by	Kernel	Min. RAM	Min. disk	Other requirements
Windows 11					
macOS 27					
Ubuntu Desktop 26.04 LTS					
Debian 13, with desktop					
Ubuntu Server 26.04 LTS					

1 Which one asks for the least hardware? _____ And for the most RAM?

_____

2 Which single line of the Windows 11 list leaves many older PCs out? _____

3 Can macOS 27 be installed on your classroom PC? Why?

_____

DONE WHEN every cell has an answer taken from an official page, and the three questions are answered.

TASK B CAN THIS PC RUN IT?

22 min · alone · 3 points

B1. Collect the facts of your classroom PC. Open a terminal (**Ctrl + Alt + T**).

```
LC_ALL=C lscpu | grep -E "Architecture|Model name|^CPU\(s\)"
free -h
df -h /
ls /sys/firmware/efi
cat /sys/class/tpm/tpm0/tpm_version_major
```

	This PC	Windows 11 asks for	Passes?
CPU (model, 64-bit?, CPUs)			
RAM (`total`)			
Disk (`Size` of `/`)			
Started with UEFI?			
TPM version			

B2. Verdict: can this PC run Windows 11? If not, which line fails? _____

B3. A laptop from 2015: Core i5 with 2 cores at 2.2 GHz (64-bit), 4 GB of RAM, 500 GB hard disk, UEFI, **no TPM 2.0**. Write **yes**, **no** or **poorly**, and the reason, for each system of part A.

System	Runs?	Reason
Windows 11		
macOS 27		
Ubuntu Desktop 26.04 LTS		
Debian 13, with desktop		
Ubuntu Server 26.04 LTS		

DONE WHEN both tables are full and B2 names the line that decides.

TASK C · FOUR CLIENTS

17 min · pairs · 3 points

Recommend one operating system to each client. Give **two reasons**, each one from the four questions: requirements, characteristics, field of use, licence and cost.

Client	I recommend	Two reasons
1 · A developer who must publish apps for iPhone		
2 · The owner of the 2015 laptop of B3. It runs Windows 10. She browses and makes video calls		
3 · A school that needs a web server: a virtual machine with 2 GB of RAM, on day and night		
4 · A student with a 2024 PC who plays the newest online games		

DONE WHEN four recommendations, each with two reasons that are not “because it is better”.

TASK D · EXIT TICKET

8 min · alone, no notes, no browser

1. Which requirement of Windows 11 do many older PCs fail?

- ☐ a) 16 GB of RAM
- ☐ b) A touch screen
- ☐ c) TPM 2.0
- ☐ d) A dedicated graphics card

2. What is a Linux distribution?

- ☐ a) A complete operating system built around the Linux kernel
- ☐ b) A version number of the Linux kernel
- ☐ c) A copy of Windows that is free of charge
- ☐ d) A pack of drivers for Linux

3. On which computers can macOS 27 be installed?

- ☐ a) Any PC with UEFI
- ☐ b) Any PC with TPM 2.0
- ☐ c) Any 64-bit computer
- ☐ d) Macs with Apple silicon

4. A web server in a virtual machine with 2 GB of RAM and no screen. Which system fits best?

- ☐ a) Windows 11
- ☐ b) Ubuntu Server
- ☐ c) macOS
- ☐ d) Ubuntu Desktop

5. What makes a real-time operating system (RTOS) special?

- ☐ a) It answers within a guaranteed time
- ☐ b) It is faster at everything
- ☐ c) It needs no hardware
- ☐ d) It only runs on servers