ANNEX A · NTFS PERMISSIONS · WORKSHEET

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

Work in `win11`. Open the terminal with **Run as administrator** (Start → type "Terminal" → right-click). If you use PowerShell, keep the quotes exactly as printed.

Task 1 · A new folder is not private. Create the folder and a file, and read the ACL.

```
mkdir C:\Tramuntana\design
echo logo > C:\Tramuntana\design\logo.txt
icacls C:\Tramuntana\design
```

How many lines? _____ What do all of them have in brackets? _____ Can Pau read the folder now? _____

Why? _____

DONE WHEN you have found the letter that means "copied from the parent folder".

Task 2 · Make it the design department's folder. First give the permissions, then cut the inheritance.

```
icacls C:\Tramuntana\design /grant "Administrators:(OI)(CI)F" "SYSTEM:(OI)(CI)F" "design:(OI)(CI)M"
icacls C:\Tramuntana\design /inheritance:r
icacls C:\Tramuntana\design
```

Lines now: _____ `F` means _____ `M` means _____

`(OI)` and `(CI)` make the entry travel to _____ and to _____

DONE WHEN the list shows Administrators, SYSTEM and design, and no line has `(I)`.

Task 3 · Pau may look. Same request as on Thursday 04/03: Pau reads, Pau changes nothing.

```
icacls C:\Tramuntana\design /grant "pau:(OI)(CI)RX"
```

Now open File Explorer → right-click the folder → Properties → Security → click `pau`. Which boxes are ticked under Allow?

Task 4 · Test as Pau. Open a window that belongs to Pau. Type his password when asked.

```
runas /user:pau cmd
```

In **Pau's** window, run each command and write **works** or **denied**:

Command	Result
`dir C:\Tramuntana\design`	
`type C:\Tramuntana\design\logo.txt`	
`echo x > C:\Tramuntana\design\p.txt`	
`del C:\Tramuntana\design\logo.txt`	

On Thursday 04/03, on Linux, Pau could not open `logo.txt` until you gave the file its own line. Why can he today?

_____

_____

DONE WHEN two commands work, two are denied, and you have closed Pau's window.

Task 5 · Ask Windows what a user can really do. Properties → Security → **Advanced** → **Effective Access** → **Select a user** → type the name → **View effective access**.

Highest permission ticked for `joan`: _____ for `aina`: _____

Task 6 · One exception. Joan must not read the budget, although she is in `design`.

```
echo 12000 > C:\Tramuntana\design\budget.txt
icacls C:\Tramuntana\design\budget.txt /deny "joan:R"
runas /user:joan "cmd /k type C:\Tramuntana\design\budget.txt"
icacls C:\Tramuntana\design\budget.txt /remove:d joan
```

Joan's result with the Deny: _____ Who wins, Allow or Deny? _____

DONE WHEN Joan is denied, and after the last command she can read the file again.

EXIT TICKET (VM UNTOUCHED, ALONE)

1. Which permission do you give the members of a department on their own folder?

☐ **a)** Read ☐ **b)** Write ☐ **c)** Modify ☐ **d)** Full control

2. In the output of `icacls`, an entry shows `(I)`. What does it mean?

☐ **a)** The entry is invalid
☐ **b)** It was inherited from the parent folder
☐ **c)** It applies only to files
☐ **d)** It was created by an administrator

3. Joan's group has Modify (allowed) on a file. Joan herself has an explicit Deny for Read. Can she open it?

☐ **a)** No: the explicit Deny wins
☐ **b)** Yes: Modify is higher than Read
☐ **c)** Yes: groups come first
☐ **d)** Only from the command line

4. What does `icacls C:\Tramuntana\dev /inheritance:r` do?

☐ **a)** Deletes every entry of the ACL
☐ **b)** Copies the ACL to all subfolders
☐ **c)** Resets the folder to the defaults
☐ **d)** Removes the entries inherited from the parent