

UNIT 07: NTFS | EXERCISE 02

Imagine we have a computer with Windows 10 for two-year courses.

- The **first year can** access two types of students: hardware and software (2 users for each type and 1 group for the first year).
- The **second year can** access security and servers (2 users for each type and 1 group for the second year).
- The users above are **standard**.
- **But we also have an advanced user called “responsible” with administrator permissions.**

We want to create some folders in D:\ according to the following criteria:

1. A personal folder for each user, which can only be accessed by the corresponding user. They can do everything. You only need to create the folder for one of the users, since the others are similar.
2. A read-only folder for all the students called “shared”. The responsible user is able to create or delete files and folders. The software user cannot access this folder.
3. A folder only for first year students into the shared folder, where they can create files and folders, but not delete them. Second year students will not be able to access.
4. Do the same as above for second year students (into the shared folder too). First year students will not be able to access.

Do the following:

- A. Explain the users and groups required for the computer.
- B. Explain the folders we need according to the criteria above.
- C. Set the NTFS permissions for all the users and groups in each folder created in part B.
- D. For the subfolders, consider two scenarios: inheritance and non-inheritance.

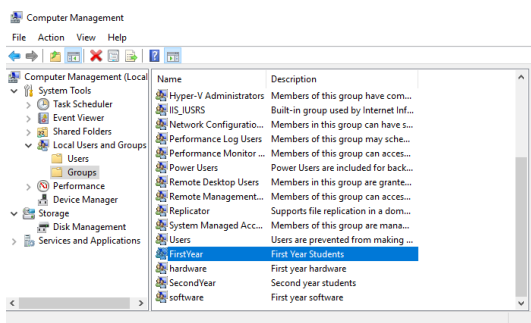
Step A | Explain the users and groups required for the computer

From **Computer Management > Local Users and Groups**

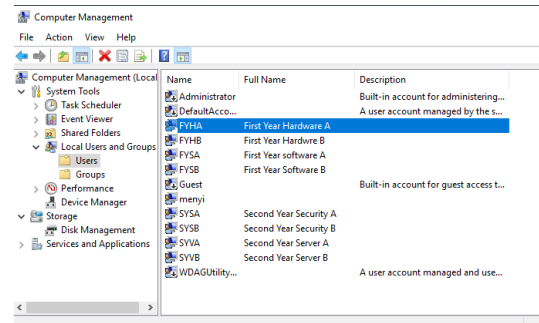
Create four groups: FirstYear (software and hardware) and SecondYear (security and server)

Also, to **create the users** for each group from **Computer Management > Local Users and Groups**

Create 2 users for each year's types, total 8 users



All users

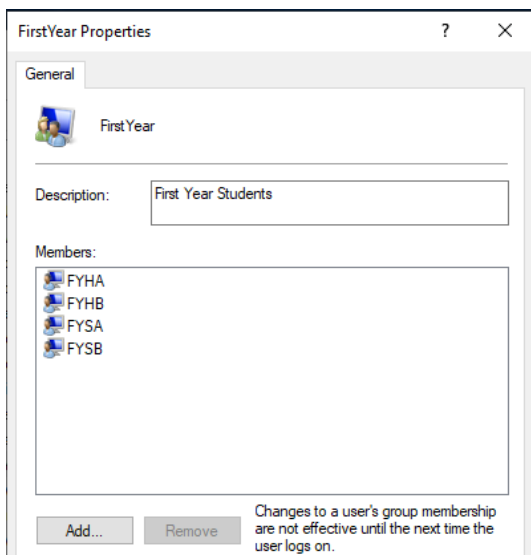


All groups

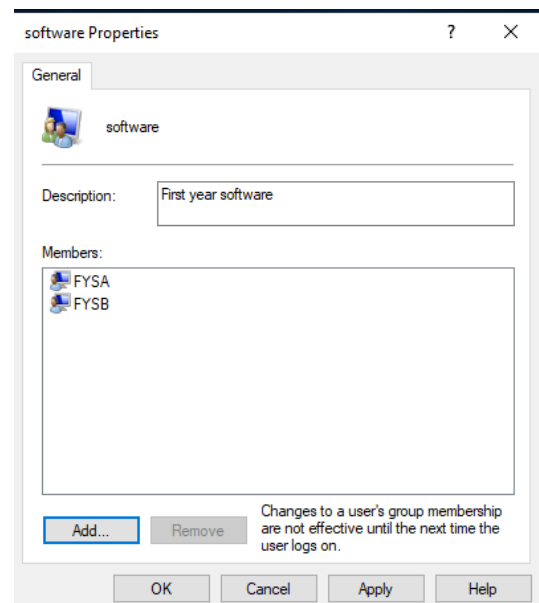
Assign their corresponding groups to each user

Add all first-year students to **FirstYear** group

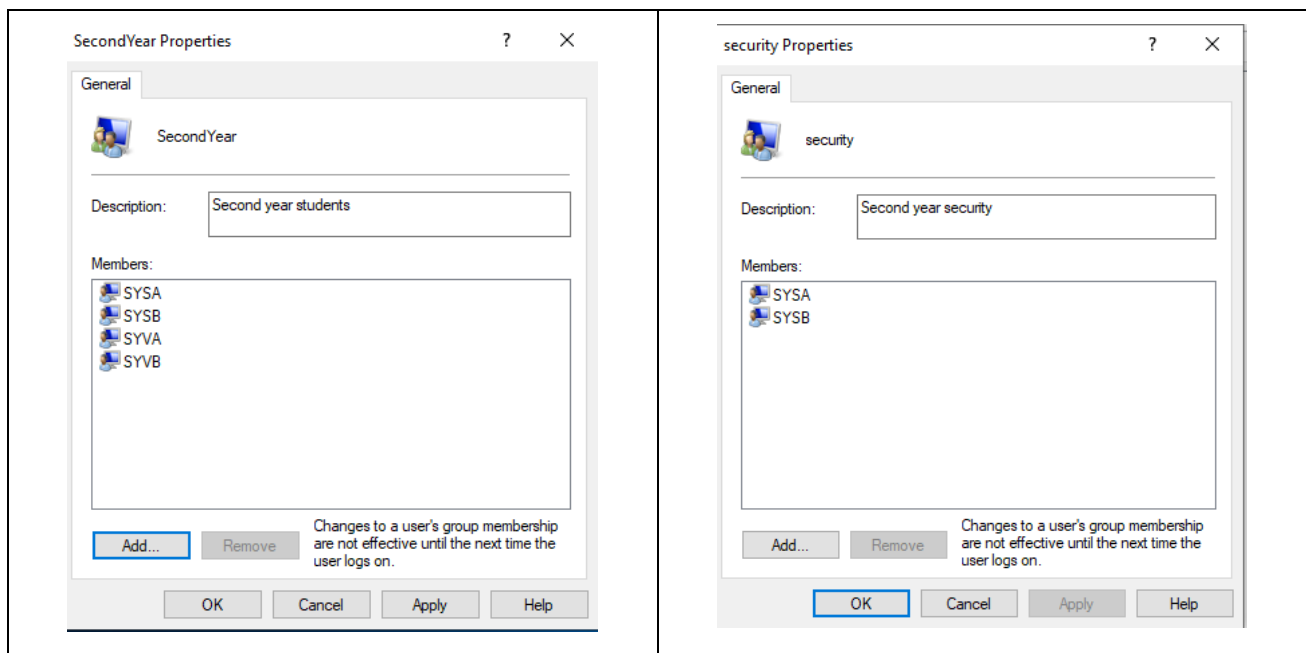
Add specified users to **software / hardware** group



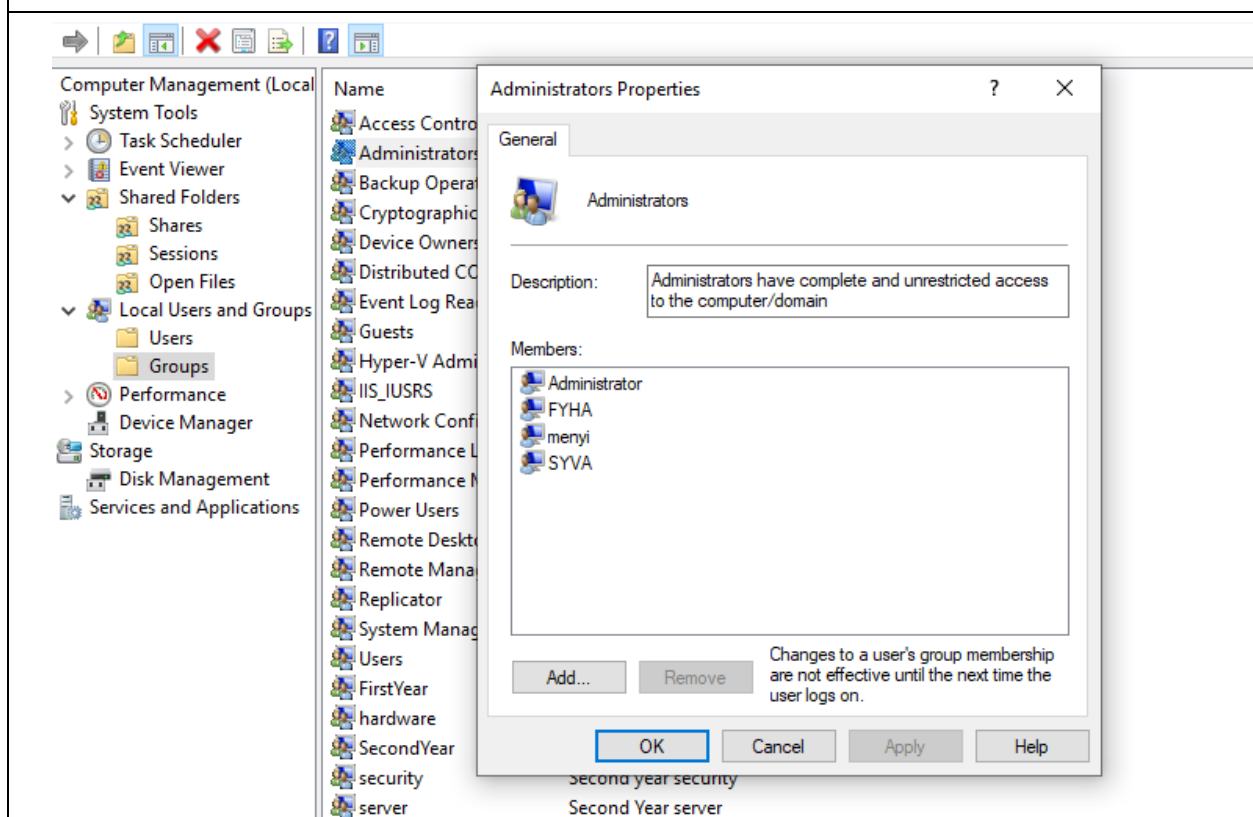
Add all first-year students to **SecondYear** group



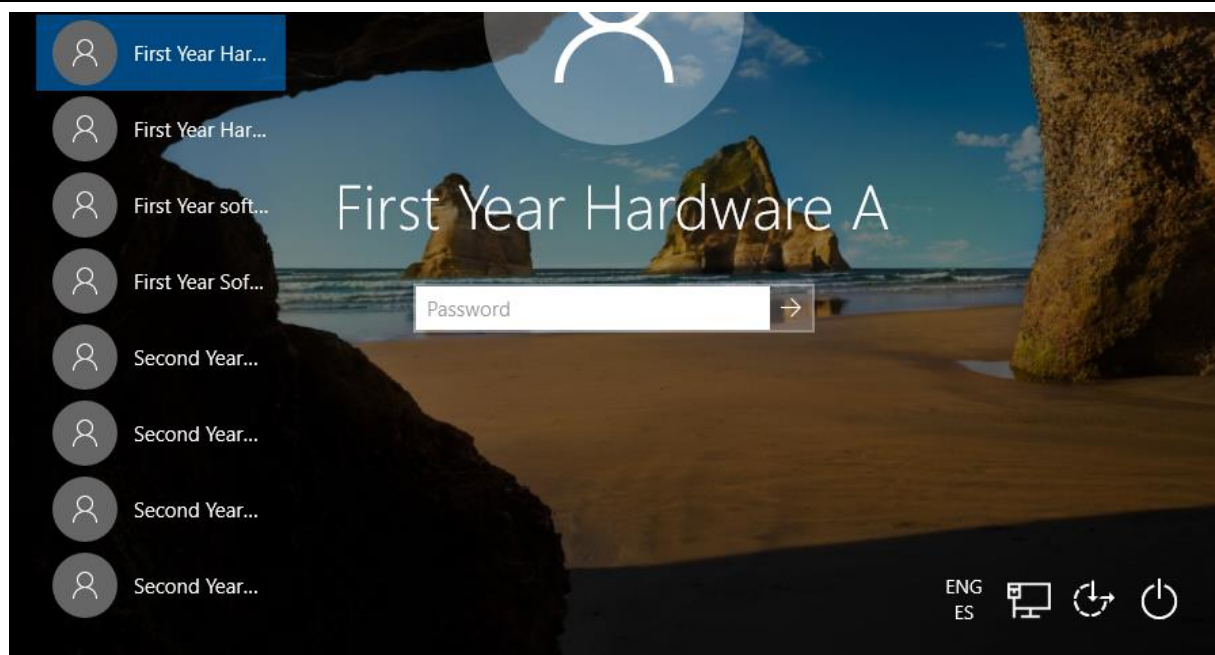
Add specified users to **server/ security** group



Also assign Administration permissions to one student of each year by adding it to Administrator group

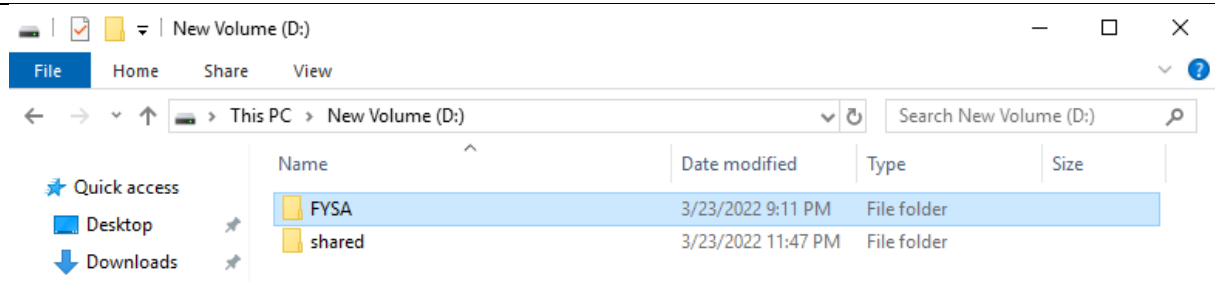


All users have been created and assigned to their corresponding groups

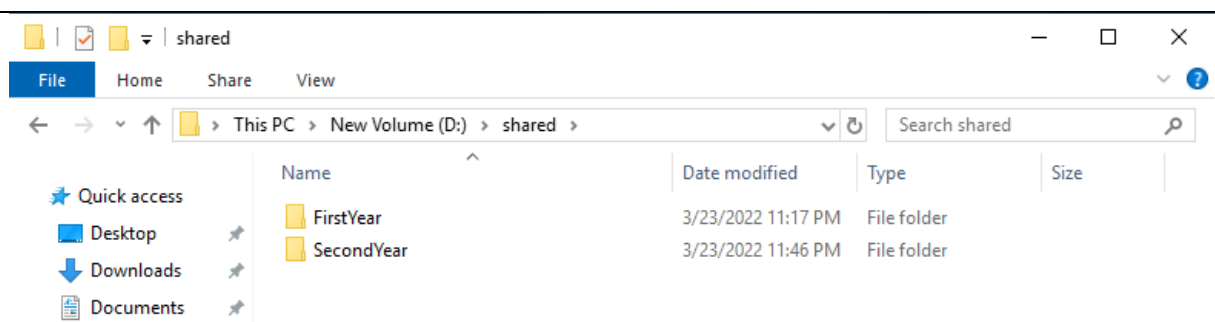


Step B | Explain the folders we need according to the criteria

One folder for each student (FYSA) | One folder called shared



Inside shared folder two folder: FirstYear and SecondYear



Step C | Set the NTFS permissions for all the users and groups

For the subfolders, consider two scenarios: inheritance and non-inheritance.

Permissions are as follows considering Full Control for Administrators group

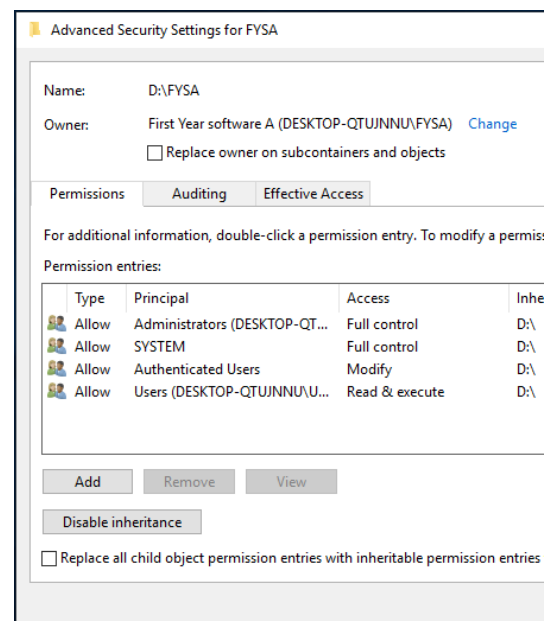
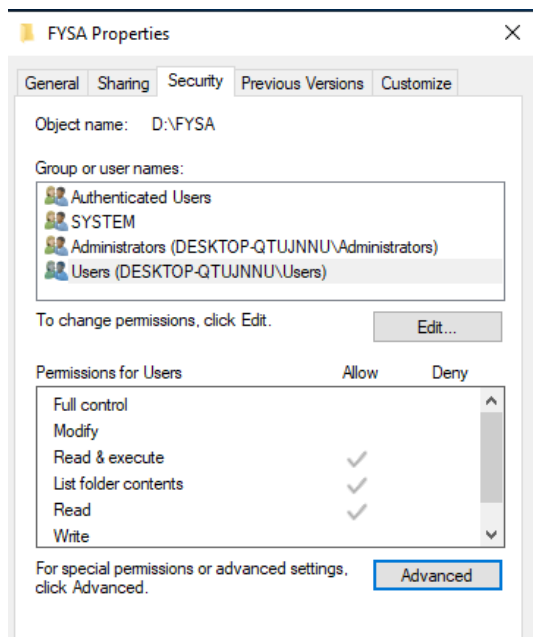
Permissions Disable inheritance

Create a **personal folder** for each user in unit (D) only accessible by the corresponding user.

Each user has full permission on its folder

Folder Name > Properties > Security > Advanced

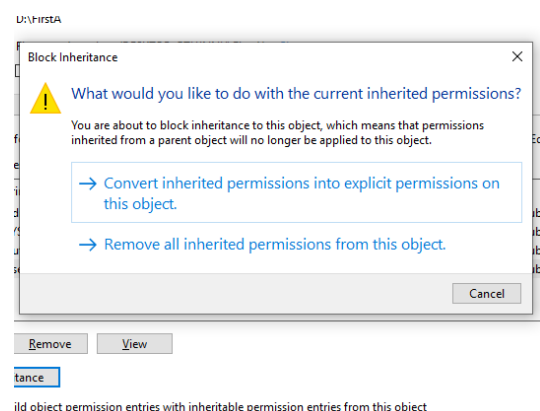
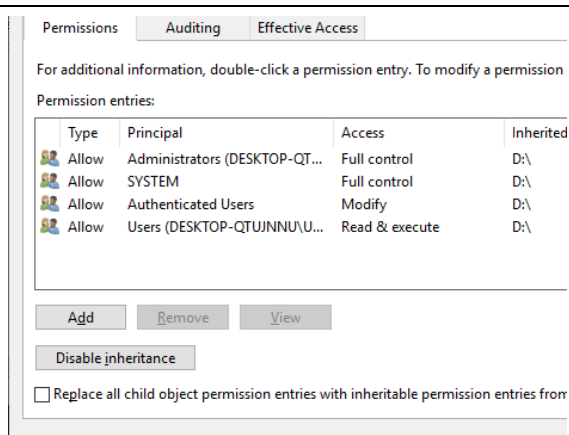
Optional Change ownership to corresponding user



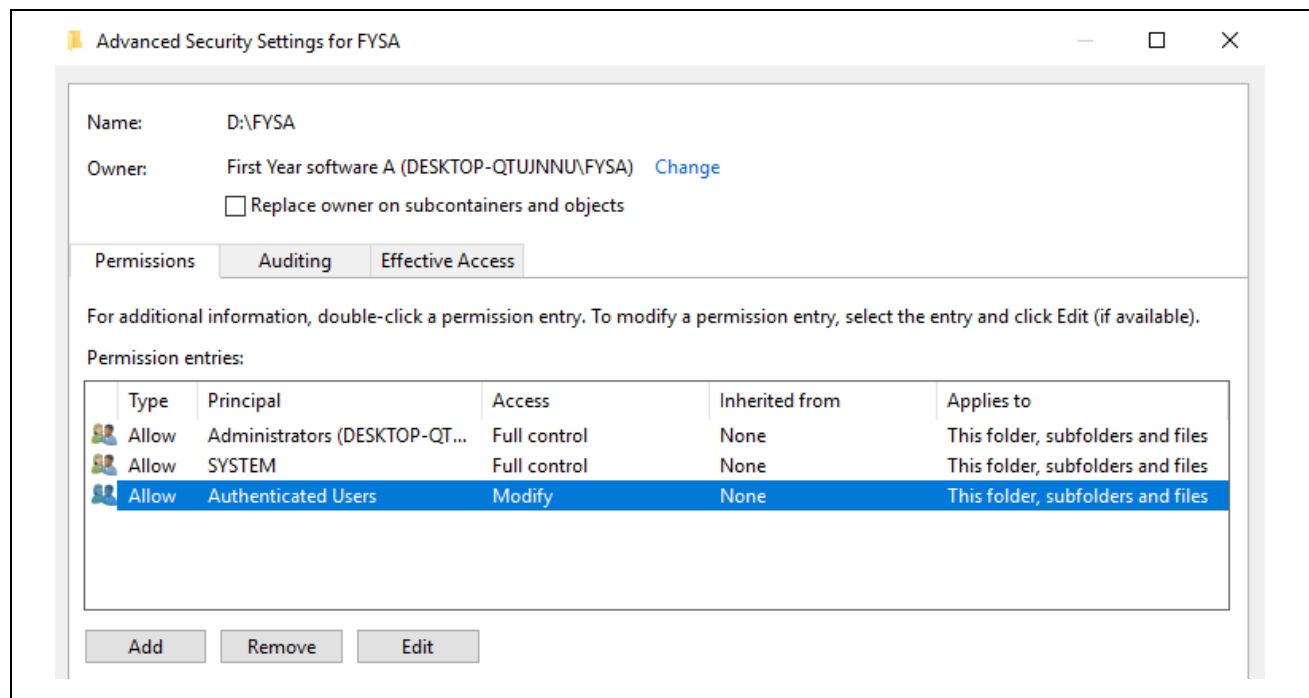
Now, in order to remove permissions, we need to disable inheritance first
and then modify permissions

Disable inheritance ...

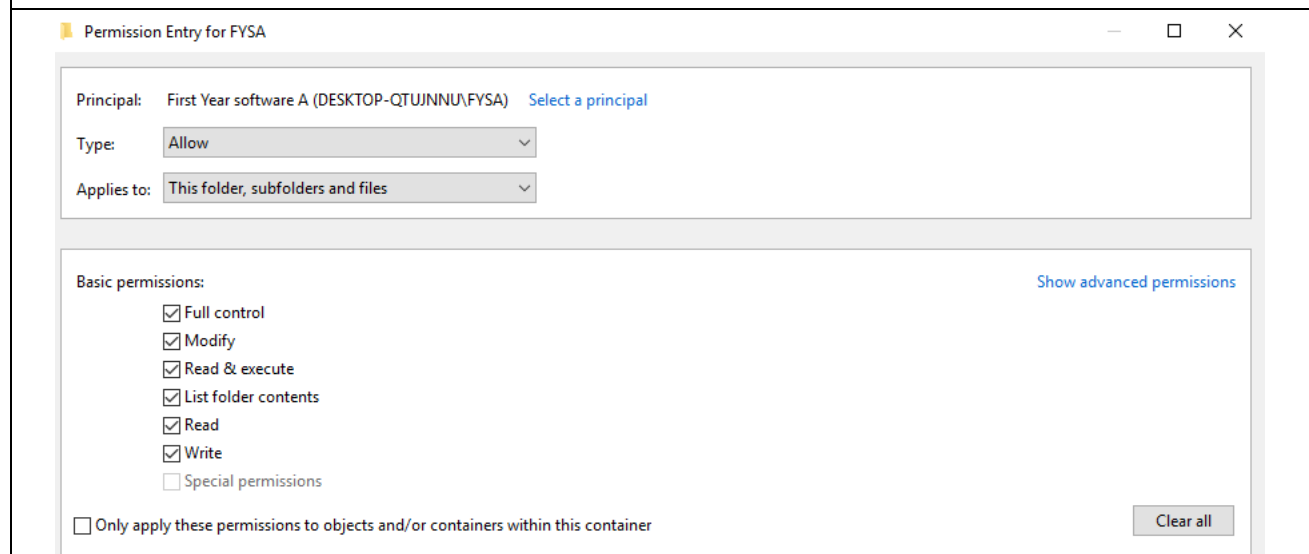
Convert inherited permission into explicit ...



Now select the group / user to remove

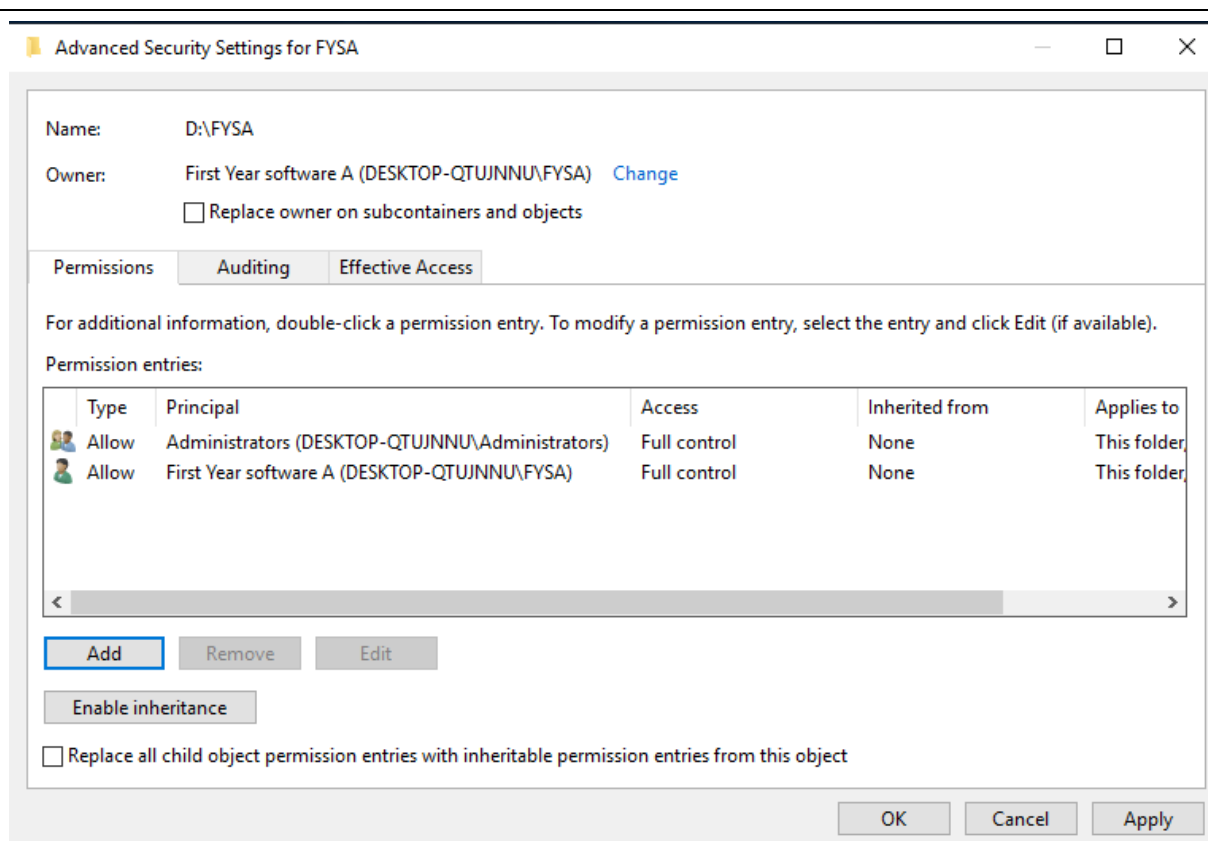


Now, we can add the corresponding user and
assign Full control permission (also Administrators group)

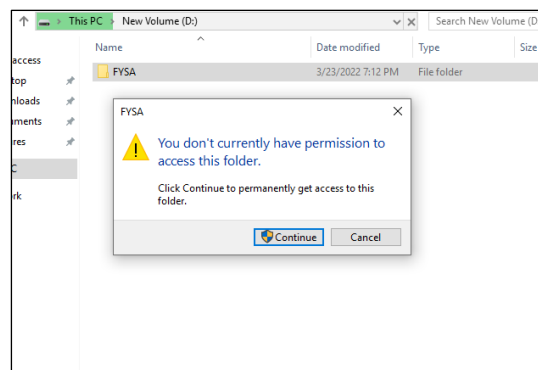


Only user FYSA and Administrators can access to this file and have full control.

Once all the permissions have been set click Ok to apply the new permissions



To verify permissions change user and try to open the folder to be tested



Permissions

Create a read-only folder for all the students called **“shared”**.

The responsible user is able to create or delete files and folders.

The software users cannot access this folder


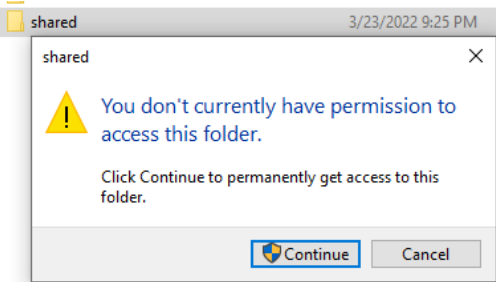
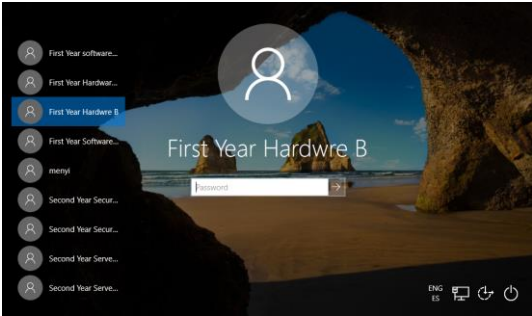
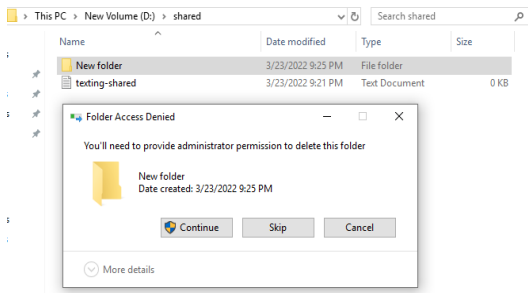
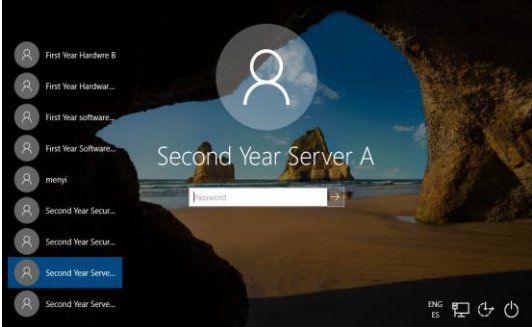
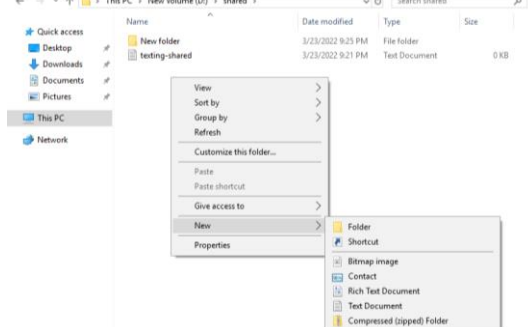
Shared folder > Properties > Advanced

Make user SYVA owner and Full Control

Edit permissions for this folder so users / groups can only read and access to software groups is denied

Verify that all permissions are applied correctly to each user and group

Login as FYSA	Access denied
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Login as FYHB	Access allowed but only read
	
Login as SYVA	Access allowed with Full Control
	
<p style="text-align: center;">Permissions</p> <p style="text-align: center;">A folder only for first year students into the shared folder</p> <p style="text-align: center;">They can create files and folders, but not delete them.</p> <p style="text-align: center;">Second year students will not be able to access.</p>	

Permission Entry for FirstYear

Principal: FirstYear (DESKTOP-QTUJNNU\FirstYear) [Select a principal](#)

Type: Allow

Applies to: This folder, subfolders and files

Advanced permissions:

☐ Full control

☒ Traverse folder / execute file

☒ List folder / read data

☒ Read attributes

☒ Read extended attributes

☒ Create files / write data

☒ Create folders / append data

☒ Write attributes

☒ Write extended attributes

☐ Delete subfolders and files

☐ Delete

☒ Read permissions

☒ Change permissions

☐ Take ownership

[Show basic permissions](#)

☐ Only apply these permissions to objects and/or containers within this container

[Clear all](#)

Assign / deny permissions click on Show Basic permissions

Also select Applies to set permission to the specific folder

Check only apply these permissions to objects and /or containers within this container

Advanced Security Settings for FirstYear

Name: D:\shared\FirstYear

Owner: Second Year Server A (DESKTOP-QTUJNNU\SYVA) [Change](#)

Permissions Auditing Effective Access

For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if available).

Permission entries:

Type	Principal	Access	Inherited from	Applies to
Deny	SecondYear (DESKTOP-QTUJNNU\SecondYear)	Full control	None	This folder, subfolders and files
Deny	software (DESKTOP-QTUJNNU\software)	Full control	None	This folder, subfolders and files
Allow	FirstYear (DESKTOP-QTUJNNU\FirstYear)	Special	None	This folder, subfolders and files
Allow	Second Year Server A (DESKTOP-QTUJNNU\SYVA)	Full control	None	This folder, subfolders and files
Allow	Administrators (DESKTOP-QTUJNNU\Administrators)	Full control	None	This folder, subfolders and files
Allow	menyi (DESKTOP-QTUJNNU\menyi)	Full control	None	This folder, subfolders and files

[Add](#) [Remove](#) [Edit](#)

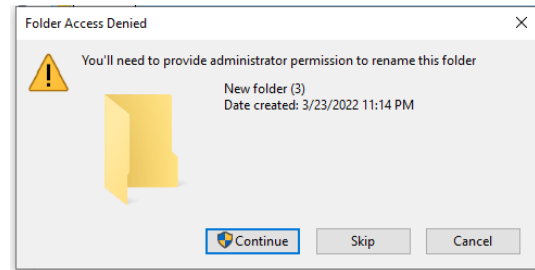
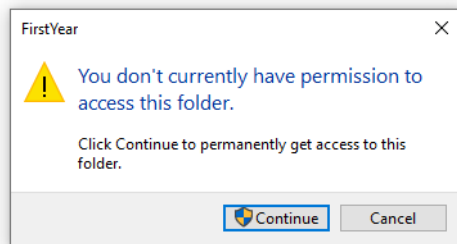
[Enable inheritance](#)

☐ Replace all child object permission entries with inheritable permission entries from this object

Verify that permissions are correctly applied

Students from SecondYear don't have access

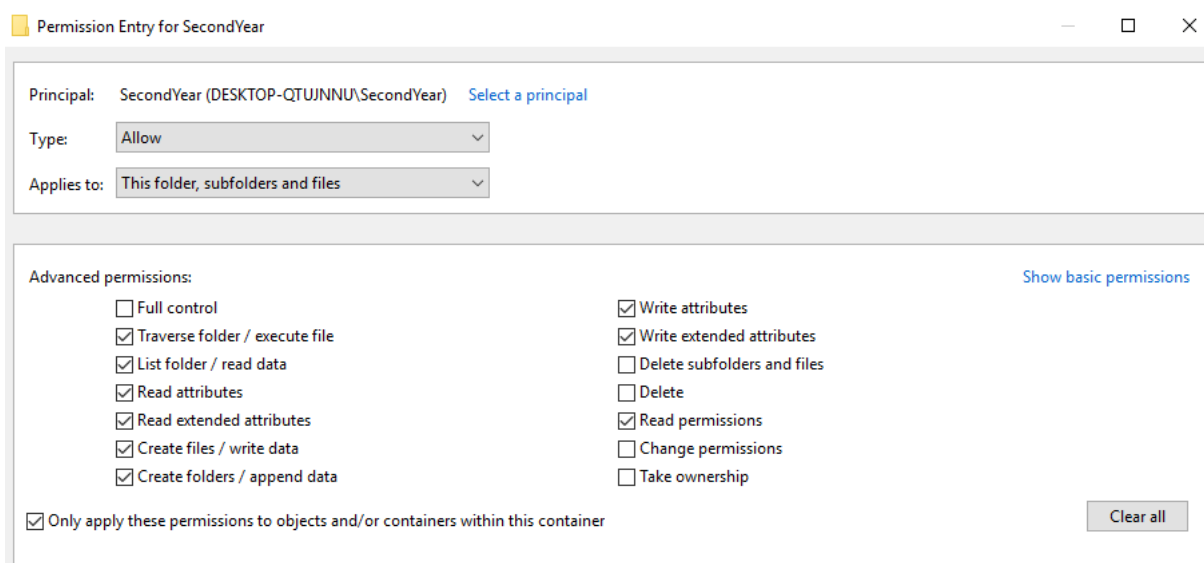
FirstYear group can only read and write



Permissions

Create also a folder into shared for **second year** students

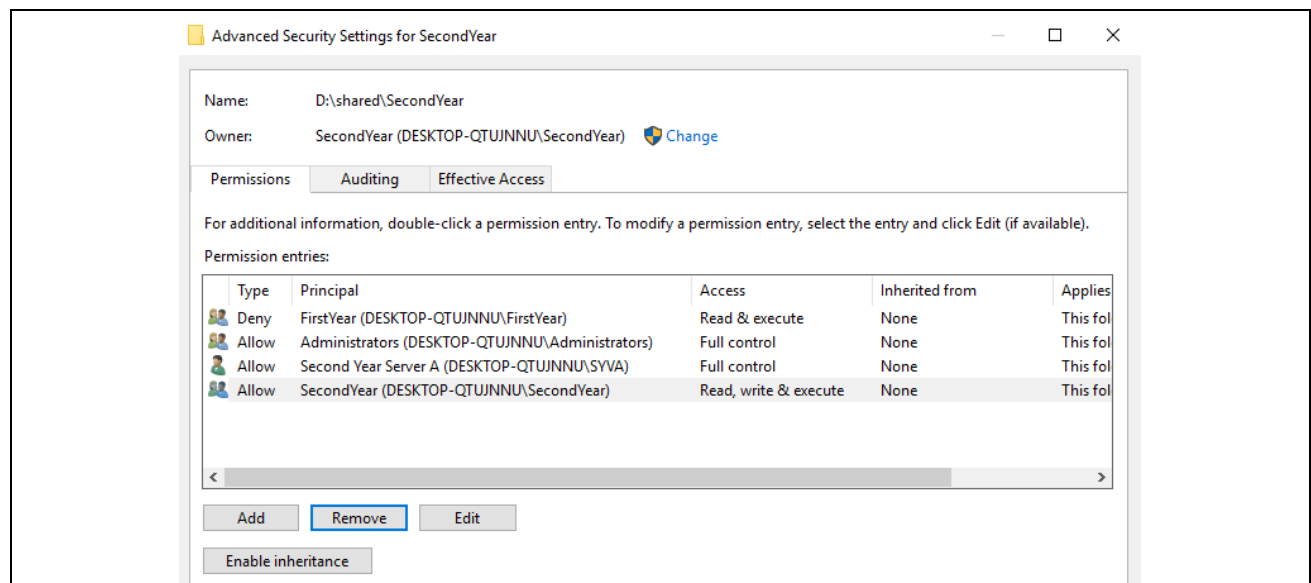
First year students will not be able to access.



Assign / deny permissions click on Show Basic permissions

Also select Applies to set permission to the specific folder

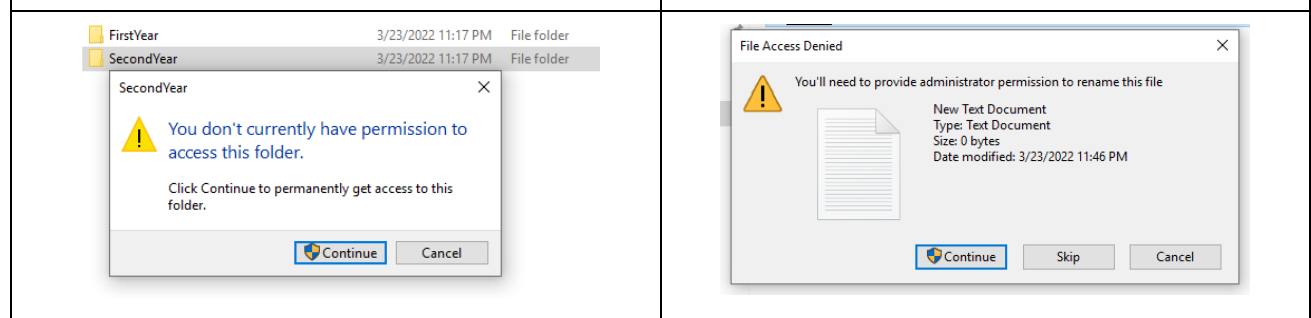
Check only apply these permissions to objects and /or containers within this container



Verify that permissions are correctly applied

Students from FirstYear don't have access

SecondYear group can only read and write



Step D | Permission's tables for folders and subfolders

PERSONAL Folder Permissions Table Disable inheritance

USER / GROUP	ALLOW					DENY				
	F.C	M	R&E	R	W	F.C	M	R&E	R	W
Student user	X	X	X	X	X					

SHARED Folder Permissions Table Disable inheritance

USER / GROUP	ALLOW					DENY				
	F.C	M	R&E	R	W	F.C	M	R&E	R	W
FirstYear			X	X						
SecondYear			X	X						
Software									X	
Responsible		X	X	X	X					

FIRSTYEAR Folder Permissions Table Disable inheritance

USER / GROUP	ALLOW					DENY				
	F.C	M	R&E	R	W	F.C	M	R&E	R	W
FirstYear			X	X	X					
Responsible		X	X	X	X					

FIRSTYEAR Folder Permissions Table With inheritance

USER / GROUP	ALLOW					DENY				
	F.C	M	R&E	R	W	F.C	M	R&E	R	W
FirstYear			X	X						
SecondYear			X	X						
Software									X	
Responsible		X	X	X	X					
FirstYear e.			X	X	X					
SecondYear e.									X	

SECONDYEAR Folder Permissions will be similar but swapping FirstYear and SecondYear permissions. However, it won't be any Deny permissions as all the SecondYear users can access to this folder.