# Solution M2: Working in the Console

One possible solution could be:

1. [lsauser@master ~]$ **sudo useradd -c "ProjectX Developer" developer**

[lsauser@master ~]$ **sudo passwd developer**

[lsauser@master ~]$ **sudo useradd -c "ProjectX Manager" manager**

[lsauser@master ~]$ **sudo passwd manager**

1. [lsauser@master ~]$ **sudo groupadd -g 3000 projectx**
2. [lsauser@master ~]$ **sudo usermod -a -G projectx developer**

[lsauser@master ~]$ **sudo usermod -a -G projectx manager**

1. [lsauser@master ~]$ **sudo mkdir -p /shared/projects/projectXYZ**
2. [lsauser@master ~]$ **sudo mkdir -p /shared/projects/projectXYZ/STAGE{1..3}/{DOCUMENTS,BUDGET}**
3. [lsauser@master ~]$ **sudo touch /shared/projects/projectXYZ/STAGE{1..3}/DOCUMENTS/document{1..10}.doc**
4. [lsauser@master ~]$ **sudo touch /shared/projects/projectXYZ/STAGE{1..3}/BUDGET/readme\_{en,bg,de}.txt**
5. [lsauser@master ~]$ **sudo chown -R manager /shared/projects/projectXYZ**
6. [lsauser@master ~]$ **sudo chgrp -R projectx /shared/projects/projectXYZ**
7. [lsauser@master ~]$ **sudo chmod -R 770 /shared/projects/projectXYZ**

[lsauser@master ~]$ **sudo chmod g+s /shared/projects/projectXYZ /shared/projects/projectXYZ/STAGE{1..3} /shared/projects/projectXYZ/STAGE{1..3}/{BUDGET,DOCUMENTS}**

1. [lsauser@master ~]$ **sudo chmod 660 /shared/projects/projectXYZ/STAGE{1..3}/DOCUMENTS/document{1..10}.doc**

[lsauser@master ~]$ **sudo chmod 660 /shared/projects/projectXYZ/STAGE{1..3}/BUDGET/readme\_{en,bg,de}.txt**

*Notes:*

**Step 4**: It could be skipped, because the **projectXYZ** directory will be created on the next step if it doesn’t exist.

**Step 10**: Second part of this step can be implemented with the **find** command. Can you find how?

**Step 11**: If we don’t know that there are files only in the **BUDGET** and **DOCUMENT** folders, we must find another way to solve this. In fact, this can be implemented with the **find** command. Can you find how?

*Sample output:*

[lsauser@master ~]$ **ls -al /shared/projects/**

total 0

drwxr-xr-x 1 root root 512 Sep 23 06:02 .

drwxr-xr-x 1 root root 512 Sep 23 06:02 ..

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 projectXYZ

[lsauser@master ~]$

[lsauser@master ~]$ **ls -al /shared/projects/projectXYZ/**

total 0

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 .

drwxr-xr-x 1 root root 512 Sep 23 06:02 ..

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 STAGE1

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 STAGE2

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 STAGE3

[lsauser@master ~]$

[lsauser@master ~]$ **ls -al /shared/projects/projectXYZ/STAGE1**

total 0

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 .

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 ..

drwxrws--- 1 manager projectxyz 512 Sep 23 06:05 BUDGET

drwxrws--- 1 manager projectxyz 512 Sep 23 06:05 DOCUMENTS

[lsauser@master ~]$

[lsauser@master ~]$ **ls -al /shared/projects/projectXYZ/STAGE1/\***

/shared/projects/projectXYZ/STAGE1/BUDGET:

total 0

drwxrws--- 1 manager projectxyz 512 Sep 23 06:05 .

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 ..

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 readme\_bg.txt

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 readme\_de.txt

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 readme\_en.txt

/shared/projects/projectXYZ/STAGE1/DOCUMENTS:

total 0

drwxrws--- 1 manager projectxyz 512 Sep 23 06:05 .

drwxrws--- 1 manager projectxyz 512 Sep 23 06:02 ..

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document10.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document1.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document2.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document3.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document4.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document5.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document6.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document7.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document8.doc

-rw-rw---- 1 manager projectxyz 0 Sep 23 06:05 document9.doc

[lsauser@master ~]$