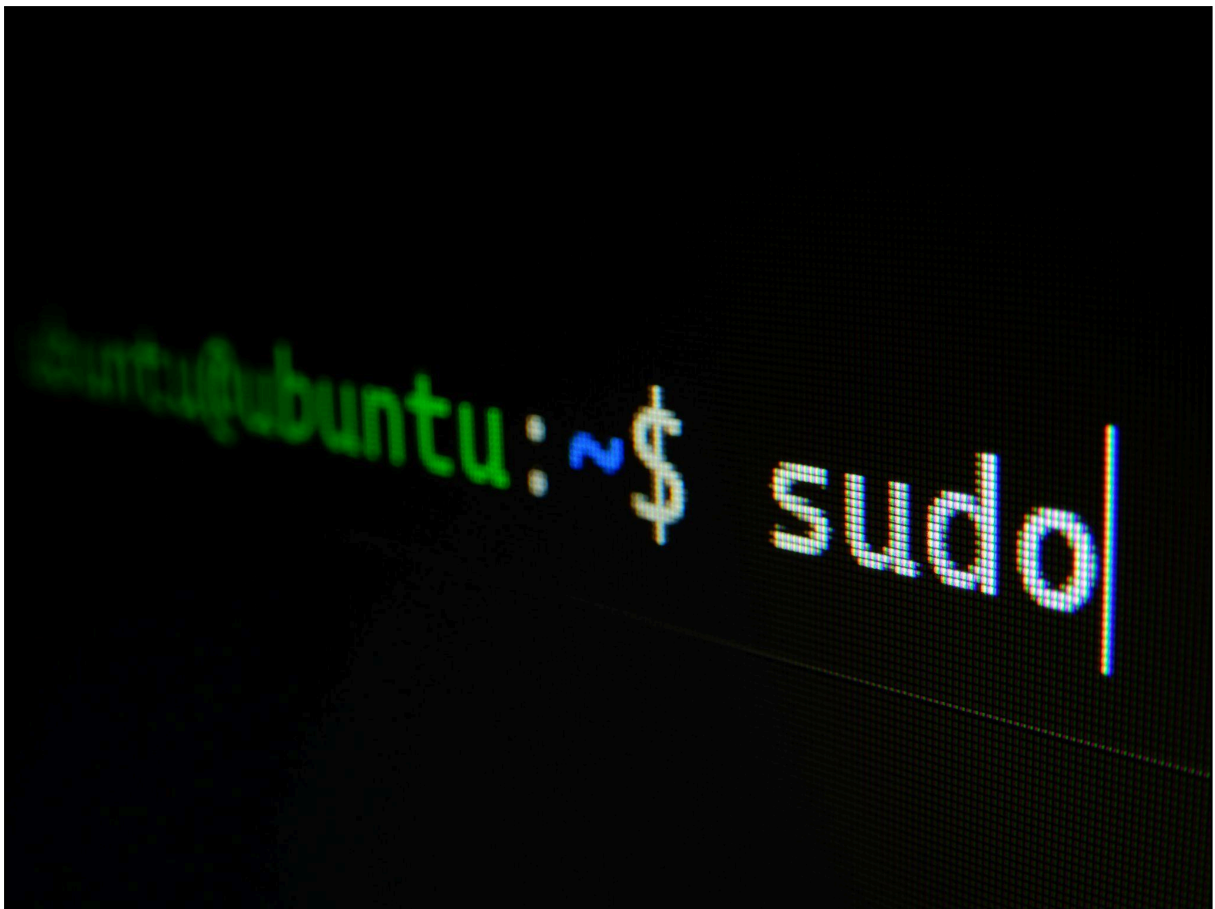


RAPPORT LINUX - SHELL



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Script 1 – creation_script.sh

Code

- Vérification et récupération des arguments, et création du dossier repo_name

```
GNU nano 7.2                                creation_script.sh *
#!/bin/bash

## name : name of the repo to create,
## N : number of empty files to create,
## prefix : the prefix to put at the start of the file's name,
## M : time between each creation of file.

# Verification of the number of arguments
if [ "$#" -ne 4 ]; then
    echo "Please enter 4 arguments following this : $0 <name> <N> <prefix> <M>"
    exit 1
fi

# Retrieving arguments
repo_name=repo_$1
N=$2
prefix=$3
M=$4

# Creating the repository
mkdir -p $repo_name
```

- Récupération de la date et création des fichiers dans une boucle "pour"

```
# Loop of N to create N files
for ((i=0;i<N;i++)) do

# Date with format : year-month-day-hour-minute-second-millisecond
now=$(date +%Y-%m-%d-%H-%M-%S-$(date +%3N | cut -c1-2))

# Creating the empty file
touch $repo_name/"$prefix"_"$now".txt

# Sleeping M milliseconds

waiting_time=$(awk "BEGIN {print $M / 1000}")
sleep $waiting_time

done

echo $N" file(s) created succefffully."
echo "Script $0 : success."
exit 0
```

Exécution

- Sans arguments : pas de traitement.

```
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
└── running_script.sh

1 directory, 3 files
selma@sarahd:~/KUIKOPS/TPSHELL$ ./creation_script.sh
Please enter 4 arguments following this : ./creation_script.sh <name> <N> <prefix> <M>
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
└── running_script.sh

1 directory, 3 files
```

- Test avec name=selma, N=6, prefix=yah, M=500

```
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
└── running_script.sh

1 directory, 3 files
selma@sarahd:~/KUIKOPS/TPSHELL$ ./creation_script.sh selma 6 yah 500
6 file(s) created successfully.
Script ./creation_script.sh : success.
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
├── repo_selma
│   ├── yah_2025-08-06-10-24-13-47.txt
│   ├── yah_2025-08-06-10-24-13-98.txt
│   ├── yah_2025-08-06-10-24-14-50.txt
│   ├── yah_2025-08-06-10-24-15-01.txt
│   ├── yah_2025-08-06-10-24-15-52.txt
│   └── yah_2025-08-06-10-24-16-03.txt
└── running_script.sh

2 directories, 9 files
```

Script 2 – reorganization_script.sh

Code

- Vérification et récupération des arguments, et création du dossier repo_name

```
GNU nano 7.2 reorganization_script.sh
#!/bin/bash

# Verification of the number of arguments
if [ "$#" -ne 1 ]; then
    echo "Please enter the name of the repository to update : $0 <name>"
    exit 1
fi

# Retrieving arguments
repo=repo_$1

mkdir -p "root/"$repo
```

- Pour chaque fichier : récupération de son nom et chemin absolu, puis récupération des valeurs de dossiers à créer

```
GNU nano 7.2 reorganization_script.sh
for file in "$repo"/*.txt; do

# Retrieving the complete path and the name of the file
filepath=$(realpath "$file")
filename=$(basename "$file")

# in cut, -d is the delimiter, -f n is the placement of the value to retrieve
# Example of a file name : git_2023-06-29-12-42-19-64.txt

prefix=$(echo "$filename" | cut -d '_' -f 1)
year=$(echo "$filename" | cut -d '-' -f 1 | cut -d '_' -f 2)
month=$(echo "$filename" | cut -d '-' -f 2)
day=$(echo "$filename" | cut -d '-' -f 3)
hour=$(echo "$filename" | cut -d '-' -f 4)
minute=$(echo "$filename" | cut -d '-' -f 5)
seconds=$(echo "$filename" | cut -d '-' -f 6)
milliseconds=$(echo "$filename" | cut -d '-' -f 7 | cut -d '.' -f 1)
```

- Créations des nouveaux dossiers, déplacement et remplissage des fichiers et attribution de droits.

```
# Path to the new directory where to stock the files
newpath_dir=root/$repo/$prefix/$year/$month/$day/$hour

#Complete new path of the file
newpath_file=$newpath_dir/$minute$seconds$milliseconds.dat

# Creating all the directories
mkdir -p $newpath_dir

# Moving the file to a new location and renaming it
mv $file $newpath_file
echo "$file" successfully moved to "$newpath_file"

# Filling the file with its old name, its old path and the name of the script that created it
echo "$filename" > $newpath_file
echo "$filepath" >> $newpath_file
echo "creation_script.sh" >>$newpath_file

# Giving reading and writing rights to owner only
chmod 600 $newpath_file
done

# Delete empty directory
rmdir $repo
echo "Script $0 : success."
exit 0
```

Exécution

- Sans arguments : pas de traitement

```
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
├── repo_selma
│   ├── yah_2025-08-05-17-41-17-43.txt
│   ├── yah_2025-08-05-17-41-17-65.txt
│   ├── yah_2025-08-05-17-41-17-93.txt
│   ├── yah_2025-08-05-17-41-18-15.txt
│   ├── yah_2025-08-05-17-41-18-39.txt
│   └── yah_2025-08-05-17-41-18-67.txt
└── running_script.sh

2 directories, 9 files
selma@sarahd:~/KUIKOPS/TPSHELL$ ./reorganization_script.sh
Please enter the name of the repository to update : ./reorganization_script.sh <name>
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
├── repo_selma
│   ├── yah_2025-08-05-17-41-17-43.txt
│   ├── yah_2025-08-05-17-41-17-65.txt
│   ├── yah_2025-08-05-17-41-17-93.txt
│   ├── yah_2025-08-05-17-41-18-15.txt
│   ├── yah_2025-08-05-17-41-18-39.txt
│   └── yah_2025-08-05-17-41-18-67.txt
└── running_script.sh

2 directories, 9 files
```

- Test avec name=selma

```
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
├── repo_selma
│   ├── yah_2025-08-06-10-24-13-47.txt
│   ├── yah_2025-08-06-10-24-13-98.txt
│   ├── yah_2025-08-06-10-24-14-50.txt
│   ├── yah_2025-08-06-10-24-15-01.txt
│   ├── yah_2025-08-06-10-24-15-52.txt
│   └── yah_2025-08-06-10-24-16-03.txt
└── running_script.sh

2 directories, 9 files
selma@sarahd:~/KUIKOPS/TPSHELL$ ./reorganization_script.sh selma
repo_selma/yah_2025-08-06-10-24-13-47.txt successfully moved to root/repo_selma/yah/2025/08/06/10/241347.dat
repo_selma/yah_2025-08-06-10-24-13-98.txt successfully moved to root/repo_selma/yah/2025/08/06/10/241398.dat
repo_selma/yah_2025-08-06-10-24-14-50.txt successfully moved to root/repo_selma/yah/2025/08/06/10/241450.dat
repo_selma/yah_2025-08-06-10-24-15-01.txt successfully moved to root/repo_selma/yah/2025/08/06/10/241501.dat
repo_selma/yah_2025-08-06-10-24-15-52.txt successfully moved to root/repo_selma/yah/2025/08/06/10/241552.dat
repo_selma/yah_2025-08-06-10-24-16-03.txt successfully moved to root/repo_selma/yah/2025/08/06/10/241603.dat
Script ./reorganization_script.sh : success.
```

- Tree après traitement

```
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
├── root
│   ├── repo_selma
│   │   └── yah
│   │       └── 2025
│   │           └── 08
│   │               └── 06
│   │                   └── 10
│   │                       ├── 241347.dat
│   │                       ├── 241398.dat
│   │                       ├── 241450.dat
│   │                       ├── 241501.dat
│   │                       ├── 241552.dat
│   │                       └── 241603.dat
└── running_script.sh

8 directories, 9 files
```

Script 3 – running_script.sh (bonus)

Code

- Script global appelant les deux scripts précédents avec des arguments pré-indiqués.

```
#!/bin/bash

declare -A repos

repos[devops]="linux git aws"
repos[data]="python scala spark"
repos[fonctionel]="spec sql postman"

for repo_name in "${!repos[@]}; do
    echo " repo name : "$repo_name
    for tool in ${repos[$repo_name]}; do
        echo "  tool name : "$tool
        ./creation_script.sh "$repo_name" 2 "$tool" 300
    done
    ./reorganization_script.sh "$repo_name"
done

echo "Script $0 : success."
exit 0
```

Exécution

- Tree avant traitement

```
selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
└── running_script.sh
```

- Lancement du script

```
seimayhn@seimayhn:~/KUIKOPS/TPSHELL$ ./running_script.sh
repo name : devops
tool name : linux
2 file(s) created successfully.
Script ./creation_script.sh : success.
tool name : git
2 file(s) created successfully.
Script ./creation_script.sh : success.
tool name : aws
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_devops/aws_2025-08-08-10-27-51-75.txt successfully moved to root/repo_devops/aws/2025/08/08/10/275175.dat
repo_devops/aws_2025-08-08-10-27-52-13.txt successfully moved to root/repo_devops/aws/2025/08/08/10/275213.dat
repo_devops/git_2025-08-08-10-27-50-89.txt successfully moved to root/repo_devops/git/2025/08/08/10/275089.dat
repo_devops/git_2025-08-08-10-27-51-28.txt successfully moved to root/repo_devops/git/2025/08/08/10/275128.dat
repo_devops/linux_2025-08-08-10-27-49-87.txt successfully moved to root/repo_devops/linux/2025/08/08/10/274987.dat
repo_devops/linux_2025-08-08-10-27-50-40.txt successfully moved to root/repo_devops/linux/2025/08/08/10/275040.dat
Script ./reorganization_script.sh : success.
repo name : fonctionnel
tool name : spec
2 file(s) created successfully.
Script ./creation_script.sh : success.
tool name : sql
2 file(s) created successfully.
Script ./creation_script.sh : success.
tool name : postman
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_fonctionnel/postman_2025-08-08-10-27-55-59.txt successfully moved to root/repo_fonctionnel/postman/2025/08/08/10/275559.dat
repo_fonctionnel/postman_2025-08-08-10-27-56-98.txt successfully moved to root/repo_fonctionnel/postman/2025/08/08/10/275698.dat
repo_fonctionnel/spec_2025-08-08-10-27-53-88.txt successfully moved to root/repo_fonctionnel/spec/2025/08/08/10/275388.dat
repo_fonctionnel/spec_2025-08-08-10-27-54-25.txt successfully moved to root/repo_fonctionnel/spec/2025/08/08/10/275425.dat
repo_fonctionnel/sql_2025-08-08-10-27-54-76.txt successfully moved to root/repo_fonctionnel/sql/2025/08/08/10/275476.dat
repo_fonctionnel/sql_2025-08-08-10-27-55-14.txt successfully moved to root/repo_fonctionnel/sql/2025/08/08/10/275514.dat
Script ./reorganization_script.sh : success.
repo name : data
tool name : python
2 file(s) created successfully.
Script ./creation_script.sh : success.
tool name : scala
2 file(s) created successfully.
Script ./creation_script.sh : success.
tool name : spark
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_data/python_2025-08-08-10-27-57-85.txt successfully moved to root/repo_data/python/2025/08/08/10/275785.dat
repo_data/python_2025-08-08-10-27-58-24.txt successfully moved to root/repo_data/python/2025/08/08/10/275824.dat
repo_data/scala_2025-08-08-10-27-58-67.txt successfully moved to root/repo_data/scala/2025/08/08/10/275867.dat
repo_data/scala_2025-08-08-10-27-59-04.txt successfully moved to root/repo_data/scala/2025/08/08/10/275904.dat
repo_data/spark_2025-08-08-10-27-59-50.txt successfully moved to root/repo_data/spark/2025/08/08/10/275950.dat
repo_data/spark_2025-08-08-10-27-59-88.txt successfully moved to root/repo_data/spark/2025/08/08/10/275988.dat
Script ./reorganization_script.sh : success.
Script ./running_script.sh : success.
```


- Tree après traitement

