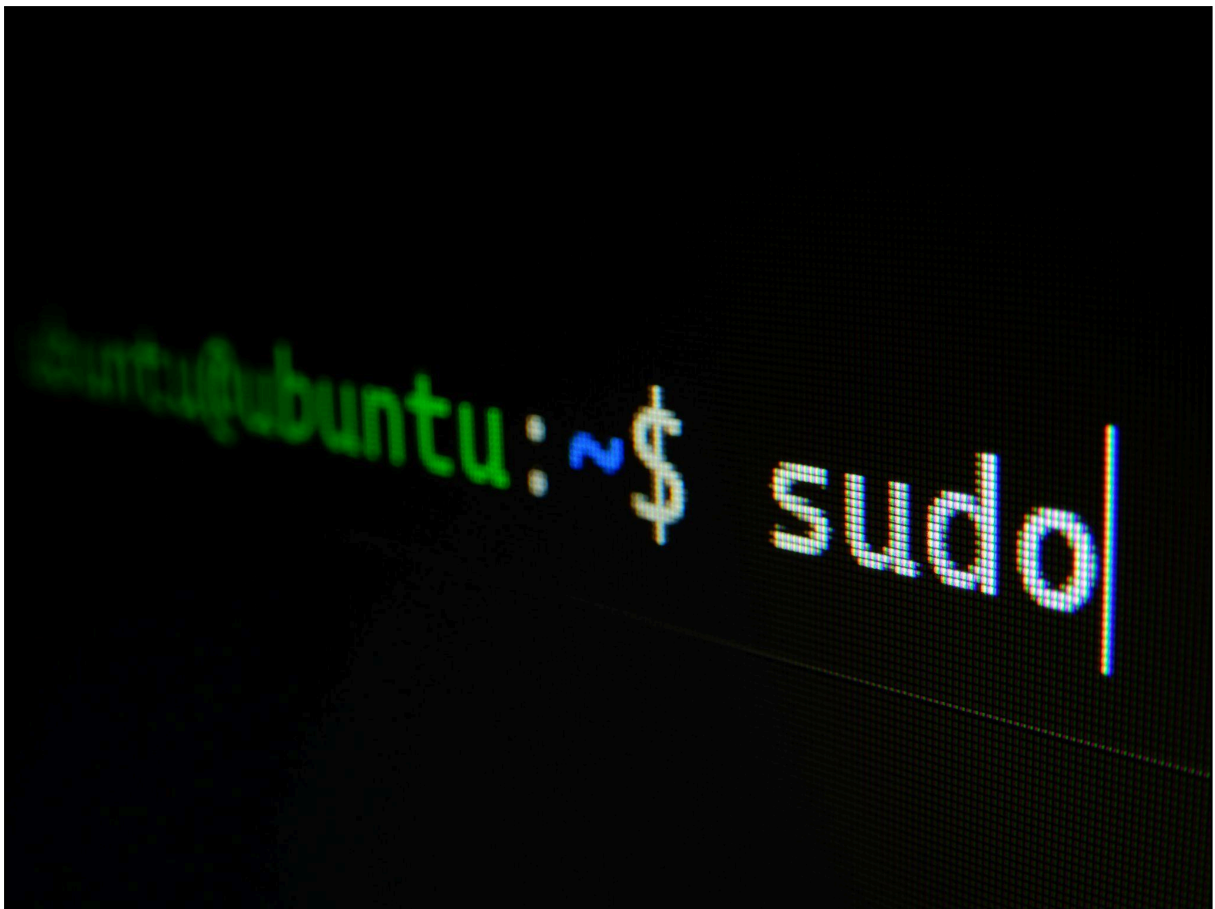


RAPPORT LINUX - SHELL



Réalisé par : YAHIOUNE Selma

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.

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

declare -A repos

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

repo_names=("devops" "data" "fonctionnel")

for repo_name in ${repo_names[@]}; do
echo " repo name : "$repo_name
for tool in ${repos[$repo_name]}; do
echo "  tool name : "$tool
./creation_script.sh $repo_name 3 $tool 300
./reorganization_script.sh $repo_name
done
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

```
selma@sarahd:~/KUIKOPS/TPSHELL$ ./running_script.sh
repo name : devops
tool name : linux
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_devops/linux_2025-08-06-10-32-45-90.txt successfully moved to root/repo_devops/linux/2025/08/06/10/324590.dat
repo_devops/linux_2025-08-06-10-32-46-21.txt successfully moved to root/repo_devops/linux/2025/08/06/10/324621.dat
Script ./reorganization_script.sh : success.
tool name : git
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_devops/git_2025-08-06-10-32-46-59.txt successfully moved to root/repo_devops/git/2025/08/06/10/324659.dat
repo_devops/git_2025-08-06-10-32-46-90.txt successfully moved to root/repo_devops/git/2025/08/06/10/324690.dat
Script ./reorganization_script.sh : success.
tool name : aws
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_devops/aws_2025-08-06-10-32-47-28.txt successfully moved to root/repo_devops/aws/2025/08/06/10/324728.dat
repo_devops/aws_2025-08-06-10-32-47-58.txt successfully moved to root/repo_devops/aws/2025/08/06/10/324758.dat
Script ./reorganization_script.sh : success.
repo name : data
tool name : python
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_data/python_2025-08-06-10-32-47-96.txt successfully moved to root/repo_data/python/2025/08/06/10/324796.dat
repo_data/python_2025-08-06-10-32-48-27.txt successfully moved to root/repo_data/python/2025/08/06/10/324827.dat
Script ./reorganization_script.sh : success.
tool name : scala
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_data/scala_2025-08-06-10-32-48-63.txt successfully moved to root/repo_data/scala/2025/08/06/10/324863.dat
repo_data/scala_2025-08-06-10-32-48-94.txt successfully moved to root/repo_data/scala/2025/08/06/10/324894.dat
Script ./reorganization_script.sh : success.
tool name : spark
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_data/spark_2025-08-06-10-32-49-32.txt successfully moved to root/repo_data/spark/2025/08/06/10/324932.dat
repo_data/spark_2025-08-06-10-32-49-62.txt successfully moved to root/repo_data/spark/2025/08/06/10/324962.dat
Script ./reorganization_script.sh : success.
repo name : fonctionnel
tool name : spec
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_fonctionnel/spec_2025-08-06-10-32-50-00.txt successfully moved to root/repo_fonctionnel/spec/2025/08/06/10/325000.dat
repo_fonctionnel/spec_2025-08-06-10-32-50-31.txt successfully moved to root/repo_fonctionnel/spec/2025/08/06/10/325031.dat
Script ./reorganization_script.sh : success.
tool name : sql
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_fonctionnel/sql_2025-08-06-10-32-50-70.txt successfully moved to root/repo_fonctionnel/sql/2025/08/06/10/325070.dat
repo_fonctionnel/sql_2025-08-06-10-32-51-00.txt successfully moved to root/repo_fonctionnel/sql/2025/08/06/10/325100.dat
Script ./reorganization_script.sh : success.
tool name : postman
2 file(s) created successfully.
Script ./creation_script.sh : success.
repo_fonctionnel/postman_2025-08-06-10-32-51-38.txt successfully moved to root/repo_fonctionnel/postman/2025/08/06/10/325138.dat
repo_fonctionnel/postman_2025-08-06-10-32-51-69.txt successfully moved to root/repo_fonctionnel/postman/2025/08/06/10/325169.dat
Script ./reorganization_script.sh : success.
```


- Tree après traitement

```

selma@sarahd:~/KUIKOPS/TPSHELL$ tree
.
├── creation_script.sh
├── reorganization_script.sh
├── root
│   ├── repo_data
│   │   ├── python
│   │   │   ├── 2025
│   │   │   │   ├── 08
│   │   │   │   │   ├── 06
│   │   │   │   │   │   ├── 10
│   │   │   │   │   │   │   ├── 324796.dat
│   │   │   │   │   │   │   └── 324827.dat
│   │   │   │   └── 08
│   │   │   │       ├── 06
│   │   │   │       │   ├── 10
│   │   │   │       │   │   ├── 324863.dat
│   │   │   │       │   │   └── 324894.dat
│   │   │   └── scala
│   │   │       ├── 2025
│   │   │       │   ├── 08
│   │   │       │   │   ├── 06
│   │   │       │   │   │   ├── 10
│   │   │       │   │   │   │   ├── 324863.dat
│   │   │       │   │   │   │   └── 324894.dat
│   │   │       └── spark
│   │   │           ├── 2025
│   │   │           │   ├── 08
│   │   │           │   │   ├── 06
│   │   │           │   │   │   ├── 10
│   │   │           │   │   │   │   ├── 324932.dat
│   │   │           │   │   │   │   └── 324962.dat
│   │   └── repo_devops
│   │       ├── aws
│   │       │   ├── 2025
│   │       │   │   ├── 08
│   │       │   │   │   ├── 06
│   │       │   │   │   │   ├── 10
│   │       │   │   │   │   │   ├── 324728.dat
│   │       │   │   │   │   │   └── 324758.dat
│   │       │   └── git
│   │       │       ├── 2025
│   │       │       │   ├── 08
│   │       │       │   │   ├── 06
│   │       │       │   │   │   ├── 10
│   │       │       │   │   │   │   ├── 324659.dat
│   │       │       │   │   │   │   └── 324690.dat
│   │       │       └── linux
│   │       │           ├── 2025
│   │       │           │   ├── 08
│   │       │           │   │   ├── 06
│   │       │           │   │   │   ├── 10
│   │       │           │   │   │   │   ├── 324590.dat
│   │       │           │   │   │   │   └── 324621.dat
│   │       └── repo_functionel
│   │           ├── postman
│   │           │   ├── 2025
│   │           │   │   ├── 08
│   │           │   │   │   ├── 06
│   │           │   │   │   │   ├── 10
│   │           │   │   │   │   │   ├── 325138.dat
│   │           │   │   │   │   │   └── 325169.dat
│   │           │   └── spec
│   │           │       ├── 2025
│   │           │       │   ├── 08
│   │           │       │   │   ├── 06
│   │           │       │   │   │   ├── 10
│   │           │       │   │   │   │   ├── 325000.dat
│   │           │       │   │   │   │   └── 325031.dat
│   │           │       └── sql
│   │           │           ├── 2025
│   │           │           │   ├── 08
│   │           │           │   │   ├── 06
│   │           │           │   │   │   ├── 10
│   │           │           │   │   │   │   ├── 325070.dat
│   │           │           │   │   │   │   └── 325100.dat
│   └── running_script.sh
50 directories, 21 files

```