MULTI USER OPERATING SYSTEM BASH SCRIPT

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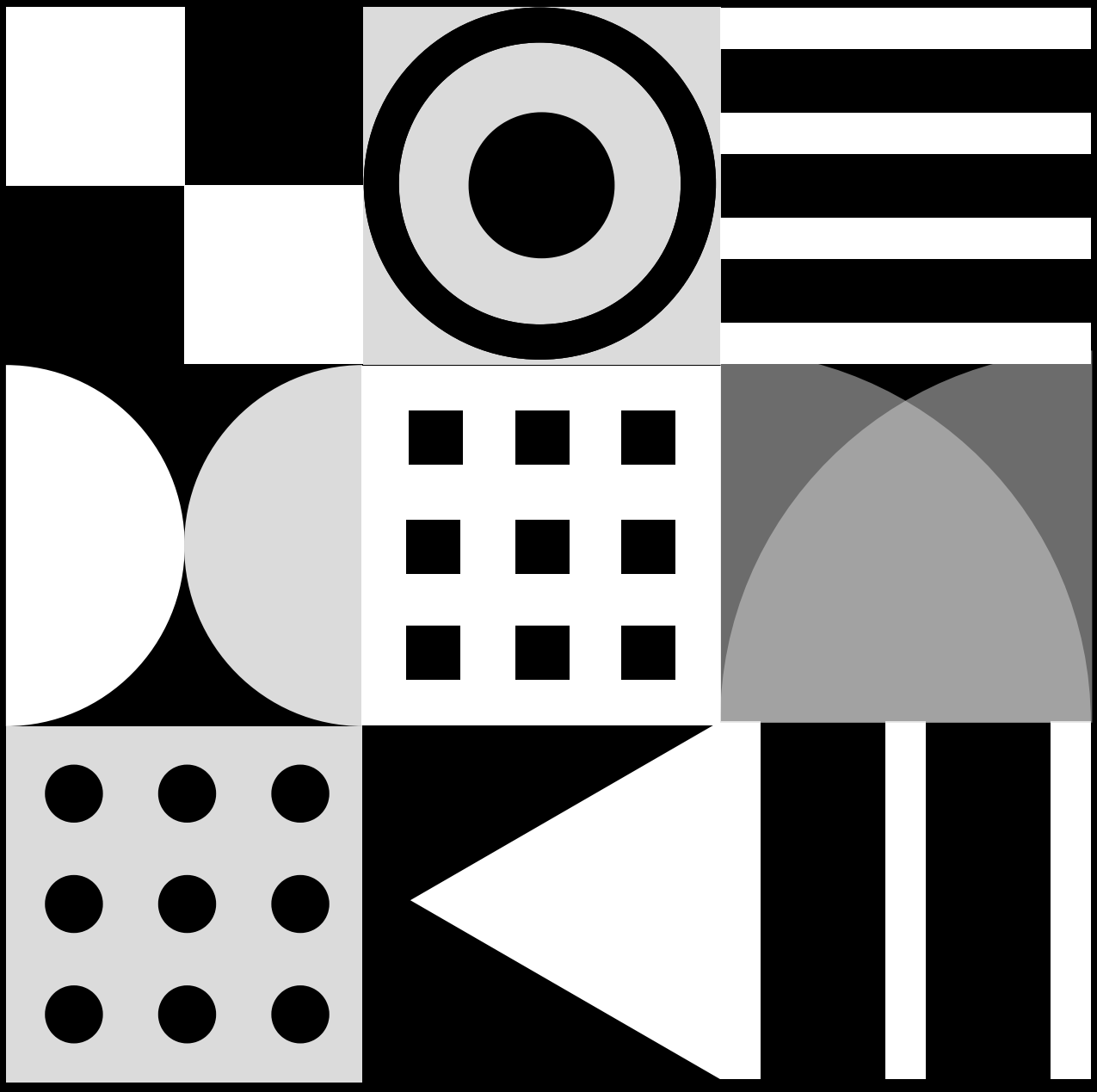

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Introduction

In this assessment exercise you are required to demonstrate an ability to compose scripts to carry out routine tasks.

The script should offer a menu with the following options:
·To create a backup copy of a script file.
o The name of the backup copy should have backup after the name of the script and be date stamped e.g. Ass3Script_backup_10_11_2017
o It should be saved to your home directory using the Environment Variable for your home directory.
o The script should error check that the file exists and is a normal file. If this is not the case then the script should allow the user to re-enter the filename until a valid filename is entered

·To create a date stamped log file called e.g. log_file_10_11_2017 containing
o A list of who is logged into the system,
o The disk usage and
o Your currently running processes.
o The file should be saved to an existing directory called log_dir which should be situated off your home directory
·To create a copy of a file.
o The file should be in your current directory (the name of the file to be given by the user)
o The destination directory name to be given by the user.
o The script should error check that the file exists and is a normal file. If this is not the case then the script should allow the user to re-enter the filename until a valid filename is entered.
o The script should check that the destination directory exists. If this is not the case then the script should allow the user to re-enter the destination directory until a valid directory is entered.

· To move the location of a file in your current directory (the name and destination to be given by the user).
o The script should error check that the file exists and is a normal file. If this is not the case then the script should allow the user to re-enter the filename until a valid filename is entered.
o The script should check that the destination directory exists. If this is not the case then the script should allow the user to re-enter the destination directory until a valid directory is entered.

· This script should loop continuously until the user chooses to quit.

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Menu Option
Option 1

• To create a backup copy of a script file.
o The name of the backup copy should have backup after the name of the script and be date stamped e.g. Ass3Script_backup_10_11_2017
o It should be saved to your home directory using the Environment Variable for your home directory.
o The script should error check that the file exists and is a normal file. If this is not the case then the script should allow the user to re-enter the filename until a valid filename is entered

```
echo "Menu"
echo "1. Backup file"
echo "2. Create file"
echo "3. Copy file"
echo "4. Move file"
echo "q. Quit"
echo "Enter your Choice: "
read Choice

case "$Choice" in
       1) while :
       do
                echo "Enter file name"
                read filename
                if [ -f $filename ]
                then
                        current_time=$(date "+%Y.%m.%d")
                        back_up="backup"
                        new_file=$filename.$back_up.$current_time
                        echo "New file name:" "$new_file"
                        cp $filename $HOME/$new_file
                        break
                else
                        echo "$filename does not exists"
                fi
                done
                ;;
```

```
┌──(mariaf㉿kali)-[~]
└─$ ls
Desktop    Downloads  log_file-2021.03.16  Pictures  scriptfile.sh  textfile2.txt
Documents  log_dir    Music                Public    Templates      Videos

┌──(mariaf㉿kali)-[~]
└─$ ./scriptfile.sh
Menu
1. Backup file
2. Create file
3. Copy file
4. Move file
q. Quit
Enter your Choice:
1
Enter file name
scriptfile.sh
New file name: scriptfile.sh.backup.2021.03.17

┌──(mariaf㉿kali)-[~]
└─$ ls
Desktop    Downloads  log_file-2021.03.16  Pictures  scriptfile.sh
Documents  log_dir    Music                Public    scriptfile.sh.backup.2021.03.17

┌──(mariaf㉿kali)-[~]
└─$
```

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Option 2

• To create a date stamped log file called e.g. log_file_10_11_2017 containing
o A list of who is logged into the system,
o The disk usage and
o Your currently running processes.
o The file should be saved to an existing directory called log_dir which should be situated off your home directory

```
2)      filename=$log_file-$(date +%Y.%m.%d)
        touch $filename
        { who; df -h; ps -aux; } > $HOME/$log_dir/$filename
        ;;
```

```
┌──(mariaf㉿kali)-[~/log_dir]
└─$ ls
log_file-2021.03.16  scriptfile.sh

┌──(mariaf㉿kali)-[~/log_dir]
└─$
```

mariaf@kali: ~/log_dir

File Actions Edit View Help

```
mariaf   tty7         2021-03-14 09:54 (:0)
Filesystem      Size  Used Avail Use% Mounted on
udev            948M     0  948M   0% /dev
tmpfs           197M  1.2M  196M   1% /run
/dev/sda1        78G   18G   56G  24% /
tmpfs           981M   37M  945M   4% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
tmpfs           4.0M     0  4.0M   0% /sys/fs/cgroup
tmpfs           197M   64K  197M   1% /run/user/1000
/dev/sr0        4.1G  4.1G     0 100% /media/cdrom0
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.5 168168 11464 ?        Ss   Mar15   0:46 /sbin/init splash
root           2  0.0  0.0      0     0 ?        S    Mar15   0:01 [kthreadd]
root           3  0.0  0.0      0     0 ?        I<   Mar15   0:00 [rcu_gp]
root           4  0.0  0.0      0     0 ?        I<   Mar15   0:00 [rcu_par_gp]
root           6  0.0  0.0      0     0 ?        I<   Mar15   0:00 [kworker/0:0H-kblockd]
root           9  0.0  0.0      0     0 ?        I<   Mar15   0:00 [mm_percpu_wq]
root          10  0.0  0.0      0     0 ?        S    Mar15   0:00 [ksoftirqd/0]
root          11  0.0  0.0      0     0 ?        I    Mar15   0:25 [rcu_sched]
root          12  0.0  0.0      0     0 ?        S    Mar15   0:02 [migration/0]
root          13  0.0  0.0      0     0 ?        S    Mar15   0:00 [cpuhp/0]
root          14  0.0  0.0      0     0 ?        S    Mar15   0:00 [cpuhp/1]
root          15  0.0  0.0      0     0 ?        S    Mar15   0:17 [migration/1]
root          16  0.0  0.0      0     0 ?        S    Mar15   0:00 [ksoftirqd/1]
root          18  0.0  0.0      0     0 ?        I<   Mar15   0:00 [kworker/1:0H-kblockd]
root          19  0.0  0.0      0     0 ?        S    Mar15   0:00 [cpuhp/2]
"log_file-2021.03.16" 211L, 20753B                                        13,77
```

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Option 3

• To create a copy of a file.

o The file should be in your current directory (the name of the file to be given by the user)

o The destination directory name to be given by the user.

o The script should error check that the file exists and is a normal file. If this is not the case then the script should allow the user to re-enter the filename until a valid filename is entered.

o The script should check that the destination directory exists. If this is not the case then the script should allow the user to re-enter the destination directory until a valid directory is entered.

```
3)
        while :
do
        echo "Enter file to name"
        read filename
        if [[ -f $filename ]];then
                echo "$filename  exists"
        fi
                echo "Enter destination"
                read dest
                if [[ -d $dest ]];then
                echo "$dest exists"
                cp $filename ${dir}/
                break
        else
                echo "error"

        fi
        done

        ;;
```

```
┌──(mariaf㉿kali)-[~]
└─$ ./scriptfile.sh
Menu
1. Backup file
2. Create file
3. Copy file
4. Move file
q. Quit
Enter your Choice:
3
Enter file to name
scriptfile.sh
scriptfile.sh  exists
Enter destination
/home/mariaf/log_dir
/home/mariaf/log_dir exists
```

```
┌──(mariaf㉿kali)-[~]
└─$ cd ~/log_dir

┌──(mariaf㉿kali)-[~/log_dir]
└─$ ls
scriptfile.sh  textfile1.txt  text.txt
```

Option 4

• To move the location of a file in your current directory (the name and destination to be given by the user).
o The script should error check that the file exists and is a normal file. If this is not the case then the script should allow the user to re-enter the filename until a valid filename is entered.
o The script should check that the destination directory exists. If this is not the case then the script should allow the user to re-enter the destination directory until a valid directory is entered.

```
4) echo "Enter file name to move:"
        read f1
        echo "Enter destination:"
        read f2
        if [ -f $f1 ] && echo "File exists"
        then
                if [ -d $f2 ]
                then
                        mv $f1 ${f2}/
                        echo "file moved"
                fi
        else
                echo "$1 does not exsist"
        fi
        ;;
```

```
└─$ ls
Desktop    Downloads  log_file-2021.03.16  Pictures  scriptfile.sh
Documents  log_dir    Music                Public    scriptfile.sh.backup.2021.03.15

┌──(mariaf㉿kali)-[~]
└─$ ./scriptfile.sh
Menu
1. Backup file
2. Create file
3. Copy file
4. Move file
q. Quit
Enter your Choice:
4
Enter file name to move:
scriptfile.sh
Enter destination:
/home/mariaf/log_dir
File exists
file moved

┌──(mariaf㉿kali)-[~]
└─$ cd ~/log_dir

┌──(mariaf㉿kali)-[~/log_dir]
└─$ ls
scriptfile.sh  textfile1.txt  text.txt
```