3). Shell Scripting (File Organizer Shell Script)

1) Created the directory and moved the directory into it and created required files.

```
master@master-node:~$ mkdir mocktest
master@master-node:~$ cd mocktest/
master@master-node:~/mocktest$ touch readme.txt notes.txt todo.txt
master@master-node:~/mocktest$ touch install.sh setup.sh deploy.sh
master@master-node:~/mocktest$ touch error.log access.log debug.log
master@master-node:~/mocktest$ touch data.csv report.csv results.csv summary.pdf
master@master-node:~/mocktest$ ls -1
access.log
data.csv
debug.log
deploy.sh
error.log
install.sh
notes.txt
readme.txt
report.csv
results.csv
setup.sh
summary.pdf
todo.txt
master@master-node:~/mocktest$
```

2) I have Created a filename with "file_organizer.sh" to write the script.

```
master@master-node:~/mocktest$ nano file_organizer.sh
```

```bash
read -p "Enter the directory path: " dir_path
if [ -z "$dir_path" ]; then
    echo "Error: No directory path entered."
    exit 1
fi
if [ ! -d "$dir_path" ]; then
    echo "Error: The directory '$dir_path' does not exist."
    exit 1
fi
read -p "Enter the file extension to organize (e.g., txt, log, sh): " extension
if [ -z "$extension" ]; then
    echo "Error: No extension entered."
    exit 1
fi
organized_dir="$dir_path/organized/$extension"
mkdir -p "$organized_dir"

files_moved=0
shopt -s nullglob
for file in "$dir_path"/*."$extension"; do
    if [ -f "$file" ]; then
        mv "$file" "$organized_dir/"
        echo "Moved: $(basename "$file") -> organized/$extension/"
        ((files_moved++))
    fi
```

```bash
done

echo "Total number of files moved: $files_moved"
```

3)Give the Permissions to the file and run it.

```
master@master-node:~/mocktest$ nano file_organizer.sh
master@master-node:~/mocktest$ chmod a+x file_organizer.sh
master@master-node:~/mocktest$ ./file_organizer.sh
Enter the directory path: /home/master/mocktest
Enter the file extension to organize (e.g., txt, log, sh): log
Moved: access.log -> organized/log/
Moved: debug.log -> organized/log/
Moved: error.log -> organized/log/
Total number of files moved: 3
master@master-node:~/mocktest$
```

All the files created

```
master@master-node:~/mocktest$ ls
data.csv  file_organizer.sh  notes.txt  organized  readme.txt  report.csv  results.csv  summary.pdf  todo.txt
master@master-node:~/mocktest$ cd organized/
master@master-node:~/mocktest/organized$ ls
log  sh
```