

Experiment No: 01

Task 1: Write a shell script to demonstrate use of echo, read and list command.

```
GNU nano 2.5.3
#!/bin/bash
echo "Welcome to the directory listing script"
echo "please enter the directory path"
read dir_path
if [ -d "$dir_path" ]; then
echo "listing contents of $dir_path"
ls -la "$dir_path"
echo "Error:$dir_path does not exist"
fi
```

Output:

```
[1]+ Stopped nano erl.sh
student@pc:~$ ./erl.sh
Welcome to the directory listing script
please enter the directory path
/home/student
listing contents of /home/student
total 356
drwxr-xr-x 29 student student 4096 Aug 22 15:21 .
drwxr-xr-x 3 root root 4096 Jul 24 02:00 ..
-rwxr-xr-x 1 student student 862 Aug 12 16:47 add.sh
-rw----- 1 student student 0 Aug 12 16:56 add.sh.save
-rwxr-xr-x 1 student student 0 Aug 12 16:56 add.sh.save.1
-rw-rw-r-- 1 student student 1024 Aug 12 16:49 .add.sh.swp
-rwxrwxr-x 1 student student 97 Aug 12 16:12 aniket.sh
-rwxrwxr-x 1 student student 97 Aug 12 11:23 aniket.sh.save
-rw-rw-r-- 1 student student 1024 Aug 12 11:22 .aniket.sh.swp
-rw-rw-r-- 1 student student 0 Aug 9 10:18 a.txt
-rw----- 1 student student 10666 Aug 22 15:10 .bash_history
-rw-r--r-- 1 student student 220 Jul 24 02:00 .bash_logout
-rw-r--r-- 1 student student 4255 Jul 24 09:26 .bashrc
drwx----- 19 student student 4096 Aug 7 14:02 .cache
-rwxrwxr-x 1 student student 154 Aug 14 10:29 code.sh
-rw-rw-r-- 1 student student 1024 Aug 14 10:33 .code.sh.swp
drwx----- 3 student student 4096 Jul 23 15:21 .compiz
drwx----- 19 student student 4096 Aug 9 10:48 .config
-rwxrwxr-x 1 student student 509 Aug 16 10:11 ctt.sh
-rwxr-xr-x 1 student student 743 Aug 8 21:35 database.sh
-rwxr-xr-x 1 student student 709 Aug 8 22:05 database.sh.save
-rw-rw-r-- 1 student student 1024 Aug 8 21:42 .database.sh.swp
-rw----- 1 student student 0 Jul 29 09:06 .dbshell
drwx----- 3 root root 4096 Jul 24 09:15 .dbus
-rwxr-xr-x 1 student student 236 Aug 12 15:15 demo.sh
-rw-rw-r-- 1 student student 0 Aug 12 14:58 demo.txt
drwxr-xr-x 4 student student 4096 Aug 22 15:07 Desktop
-rw-r--r-- 1 student student 25 Jul 24 07:32 .dmrc
```

Task 2: Write a shell script to demonstrate use of test, touch and cat commands

```
GNU nano 2.5.3
#!/bin/bash
touch zeal.txt
cat<<EOF>>zeal.txt
This is a sample file used to store my profile
I am Riyan Shaikh, from TE B  IT
EOF
;then
echo "File exist"
else
echo "File doesnot exist"
fi
echo "File contents:"
cat zeal.txt
if test -r zeal.txt;then
echo "File is readable"
else
echo "File is not readable"
fi
if test -w zeal.txt;then
echo "File is writable"
else
echo "File is not writable"
fi
if test -x zeal.txt;then
echo "File is executable"
else
echo "File is not executable"
fi
```

Output:

```
student@pc:~$ ./tst.sh
File exist
File contents:
This is a sample file used to store my profile
I am Riyan Shaikh, from TE B  IT
File is readable
File is writable
File is not executable
student@pc:~$
```


Task 3: Write a shell script to demonstrate the use of grep and sed commands.

```
GNU nano 2.5.3 File: gs.sh
#!/bin/bash
file="sample.txt"
echo "Creating $file with sample content..."
cat <<EOL > "$file"
Hello, this is a sample text file.
This file contains several lines of text.
Some lines contain the word 'sample'.
This is the last line.
EOL

# Display the contents of the file
echo "Contents of $file:"
cat "$file"
echo

# Use grep to search for lines containing the word 'sample'
echo "Using grep to find lines containing the word 'sample':"
grep "sample" "$file"
echo

# Use sed to replace the word 'sample' with 'example'
echo "Using sed to replace 'sample' with 'example':"
sed 's/sample/example/g' "$file"
echo

# Use sed to modify the file in place (replace 'sample' with 'example' permanently)
echo "Modifying the file in place using sed..."
sed -i 's/sample/example/g' "$file"

# Display the modified contents of the file
echo "Modified contents of $file:"
cat "$file"

# Clean up the file
echo "Cleaning up..."
rm "$file"
```

Output:

```
student@pc:~$ nano erl.sh
student@pc:~$ nano gs.sh
student@pc:~$ bash gs.sh
Creating sample.txt with sample content...
Contents of sample.txt:
Hello, this is a sample text file.
This file contains several lines of text.
Some lines contain the word 'sample'.
This is the last line.

Using grep to find lines containing the word 'sample':
Hello, this is a sample text file.
Some lines contain the word 'sample'.

Using sed to replace 'sample' with 'example':
Hello, this is a example text file.
This file contains several lines of text.
Some lines contain the word 'example'.
This is the last line.

Modifying the file in place using sed...
Modified contents of sample.txt:
Hello, this is a example text file.
This file contains several lines of text.
Some lines contain the word 'example'.
This is the last line.
Cleaning up...
student@pc:~$
```