Assignment: Create & Manage Files

Problem Statement

Create a directory called student_records. Inside it, create three files:

- stud1.txt

- stud2.txt

- stud3.txt

id, name, marks

Tasks

1. Create directory

2. Create files

3. Insert sample data

4. Display contents of all files

5. Append one more student record to each file

```
MINGW64:/c/Users/91637/OneDrive/Desktop/UST_assignments/student_records

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments (main)
$ mkdir student_records

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments (main)
$ cd student_records

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat > stud1.txt
1, Visa, 51
2, Ragul,43
3, Santhosh, 64

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat stud1.txt
1, Visa, 51
2, Ragul,43
3, Santhosh, 64

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat >stud2.txt
4, chandran, 32
5, Kumar, 45,
6, Nandhini, 54

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat stud2.txt
4, chandran, 32
5, Kumar, 45,
 Nandhini, 54

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ nano stud2.txt

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat stud2.txt
4, chandran, 32
5, Kumar, 45
6, Nandhini, 54

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat > stud3.txt
7, thillai, 12
8, Raja, 56
9, Mukesh, 89

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat stud3.txt
7, thillai, 12
8, Raja, 56
9, Mukesh, 89

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat stud1.txt stud2.txt stud3.txt
1, Visa, 51
2, Ragul,43
3, Santhosh, 64
4, chandran, 32
5, Kumar, 45
6, Nandhini, 54
7, thillai, 12
8, Raja, 56
9, Mukesh, 89
```

```
91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat >> stud1.txt
4, Sanjay, 33


91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat>> stud2.txt
7, Mani, 55


91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat>>stud3.txt
10, Kholi, 18


91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/student_records (main)
$ cat stud1.txt stud2.txt stud3.txt
1, Visa, 51
2, Ragul,43
3, Santhosh, 64
4, Sanjay, 33
4, chandran, 32
5, Kumar, 45
6, Nandhini, 54
7, Mani, 55
7, thillai, 12
8, Raja, 56
9, Mukesh, 89
10, Kholi, 18
```

2.

Assignment: Working With Permissions

Problem Statement

Create a file report.txt and change its permissions so that:

- Owner: read + write

- Group: read only

- Others: no permission

Tasks

1. Use chmod symbolic mode

2. Use chmod numeric mode

3. Verify permissions using ls -l

```
/usr/bin/cp: cannot create regular file '/etc/services': Permission denied
'C:\WINDOWS\system32\drivers\etc\networks' -> '/etc/networks'
/usr/bin/cp: cannot create regular file '/etc/networks': Permission denied
rm: cannot remove '/etc/post-install/01-devices.post': Permission denied
rm: cannot remove '/etc/post-install/03-mtab.post': Permission denied
rm: cannot remove '/etc/post-install/06-windows-files.post': Permission denied
rm: cannot remove '/etc/post-install/99-post-install-cleanup.post': Permission d
enied

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment (main)
$ mkdir report_permission

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment (main)
$ cd report_permission

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/report_permission (main)
$ cat >report.txt
This is a sample report file

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/report_permission (main)
$ cat report.txt
This is a sample report file

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/report_permission (main)
$ chmod u=rw,g=r,o= report.txt

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/report_permission (main)
$ chmod 640 report.txt

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/report_permission (main)
$ ls -l report.txt
-rw-r--r-- 1 91637 197609 29 Dec 15 13:25 report.txt
```

rw-r-r—Linux **accepts the command** but **cannot apply it**, so permissions stays rw-r-r.

3.

Assignment: Shell Script – Simple Calculator

Problem Statement

Write a shell script calc.sh that:

- Accepts two numbers and an operator (+, -, *, /)

- Performs the requested operation

- Displays the result

```
91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calcula
tor (main)
$ nano calc.sh

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ chmod +x calc.sh

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ ./calc.sh
Enter first number:
21
Enter operator (+ - * /):
+
Enter Second number:
21
./calc.sh: line 10: syntax error near unexpected token `;;'
./calc.sh: line 10: `*/result=$((num1*num2));;'

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ nano calc.sh

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ ./calc.sh
Enter first number:
21
Enter operator (+ - * /):
+
Enter Second number:
21
./calc.sh: line 12: syntax error near unexpected token `"Invalid operator"'
./calc.sh: line 12: `echo "Invalid operator"'

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ nano calc.sh

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ ./calc.sh
Enter first number:
21
Enter operator (+ - * /):
+
Enter Second number:
21
Result:42

91637@VISAGAN MINGW64 ~/OneDrive/Desktop/UST_assignments/Unix_assignment/calculator (main)
$ ./calc.sh
Enter first number:
21
Enter operator (+ - * /):
-
Enter Second number:
20
Result:1
```

Calc.sh:-

```
echo "Enter first number:"
read num1
echo "Enter operator (+ - * /):"
read op
echo "Enter Second number:"
read num2
case $op in
+) result=$((num1+num2));;
-)result=$((num1-num2));;
\*)result=$((num1*num2));;
/)result=$((num1/num2));;
*)
echo "Invalid operator"
exit 1;;
esac
echo "Result:$result"
```