Assignment 2 - Unix Commands

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 a directory
2. Create files
3. Insert sample data
4. Display contents of all files
5. Append one more student record to each file

```
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2 (main)
$ cd students_record
bash: cd: students_record: No such file or directory

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2 (main)
$ mkdir students_record

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2 (main)
$ cd students_record

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat > stud1.txt
1001, Adarsh, 78
1002, Alan, 67
1005, Babu, 81


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat > stud2.txt
1003, Aravind, 79
1004, Aswin, 65
1006, Celvin, 54


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat > stud3.txt
1009, Das, 45
1013, George, 82
1017, Jeevan, 77


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat stud1.txt
1001, Adarsh, 78
1002, Alan, 67
1005, Babu, 81

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat stud2.txt
1003, Aravind, 79
1004, Aswin, 65
1006, Celvin, 54

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat stud3.txt
1009, Das, 45
1013, George, 82
1017, Jeevan, 77
```

```
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat >> stud1.txt
1023, Shyam, 49
1031, Sabu, 61


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat stud1.txt
1001, Adarsh, 78
1002, Alan, 67
1005, Babu, 81
1023, Shyam, 49
1031, Sabu, 61

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat >> stud2.txt
1039, Abhishek, 71
1043, Ganga, 58


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat stud2.txt
1003, Aravind, 79
1004, Aswin, 65
1006, Celvin, 54
1039, Abhishek, 71
1043, Ganga, 58

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat >> stud3.txt
1046, Dipu, 83


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat stud3.txt
1009, Das, 45
1013, George, 82
1017, Jeevan, 77
1046, Dipu, 83
```

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

```
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ cat > report.txt
hello new file created for report


arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ls -l report.txt
-rw-r--r-- 1 arjun 197609 148 Dec 14 18:06 report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod u-rw report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod g-rwx report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod o-rwx report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ls -l report.txt
-r--r--r-- 1 arjun 197609 148 Dec 14 18:06 report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod u+rw report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod g+r report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ls -l report.txt
-rw-r--r-- 1 arjun 197609 148 Dec 14 18:06 report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod 640 report.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ls -l report.txt
-rw-r--r-- 1 arjun 197609 148 Dec 14 18:06 report.txt
```

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

```
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ touch calc.sh

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ls
calc.sh  report.txt  stud1.txt  stud2.txt  stud3.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ nano calc.sh

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ chmod +x calc.sh

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ./calc.sh
Enter first number
5
Enter second number
6
Enter operator (+ - * /)
+
Result = 11

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Assig-2/students_record (main)
$ ./calc.sh
Enter first number
9
Enter second number
4
Enter operator (+ - * /)
/
Result = 2
```

```
echo "Enter first number"
read a

echo "Enter second number"
read b

echo "Enter operator (+ - * /)"
read op

if [ "$op" = "+" ]; then
    result=$((a + b))
    echo "Result = $result"

elif [ "$op" = "-" ]; then
    result=$((a - b))
    echo "Result = $result"

elif [ "$op" = "*" ]; then
    result=$((a * b))
    echo "Result = $result"

elif [ "$op" = "/" ]; then
    result=$((a / b))
    echo "Result = $result"

else
    echo "Invalid operator"
fi
```