

Practical 3

1. Write a shell script to generate mark- sheet of a student. Take 3 subjects, calculate and display total marks, percentage and class obtained by the student.

CODE:

```
MINGW64:/c/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3
GNU nano 8.7 marksheet.sh
#!/bin/bash

echo "Enter Student Name:"
read name

echo "Enter marks for Subject 1:"
read m1
echo "Enter marks for Subject 2:"
read m2
echo "Enter marks for Subject 3:"
read m3

total=$((m1 + m2 + m3))
percentage=$((total / 3))

if [ $percentage -ge 75 ]; then
    class="Distinction"
elif [ $percentage -ge 60 ]; then
    class="First Class"
elif [ $percentage -ge 50 ]; then
    class="Second Class"
elif [ $percentage -ge 40 ]; then
    class="Pass"
else
    class="Fail"
fi

echo "-----"
echo "Student: $name"
echo "Total Marks: $total"

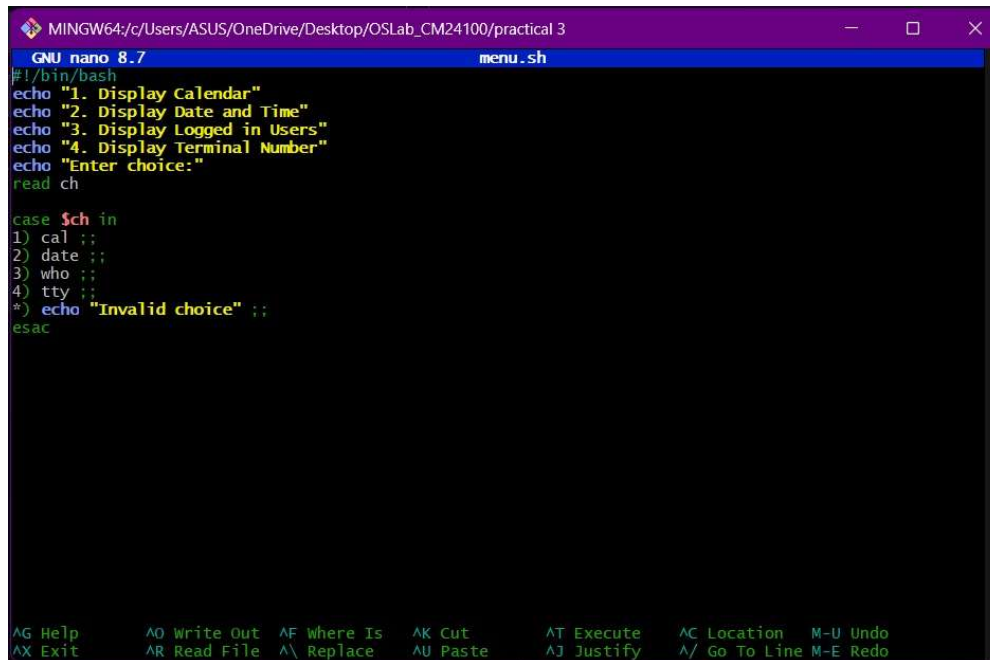
[ Read 33 Lines ]
AG Help      AD Write Out  AF Where Is  AK Cut       AT Execute   AC Location  M-U Undo
AX Exit      AR Read File  \ Replace   AU Paste     AJ Justify   A/ Go To Line M-E Redo
```

OUTPUT:

```
MINGW64:/c/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3
Enter Student Name:
Poonam
Enter marks of Subject 1:
78
Enter marks of Subject 2:
85
Enter marks of Subject 3:
90
-----
Student Name: Poonam
Total Marks: 253
Percentage: 84%
Class: First Class
ASUS@LAPTOP-4RQNF3J0R MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$
```

Q2. Write a menu driven shell script which will print the following menu and execute the given task. Display calendar of current month, Display today's date and time , Display usernames those are currently logged in the system on Display Your terminal number.

CODE:

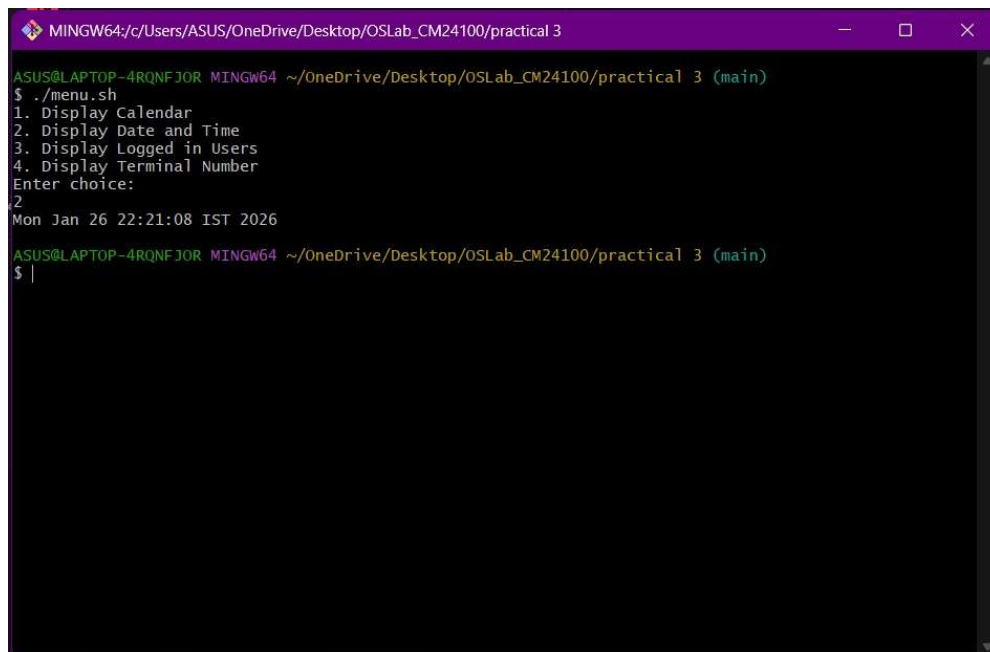
A screenshot of a terminal window with a nano editor. The title bar shows the file path: MINGW64:/c/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3. The editor is editing a file named menu.sh. The script content is as follows:

```
#!/bin/bash
echo "1. Display Calendar"
echo "2. Display Date and Time"
echo "3. Display Logged in Users"
echo "4. Display Terminal Number"
echo "Enter choice:"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
```

The bottom status bar of the nano editor shows various keyboard shortcuts like AG Help, AX Exit, AO Write Out, etc.

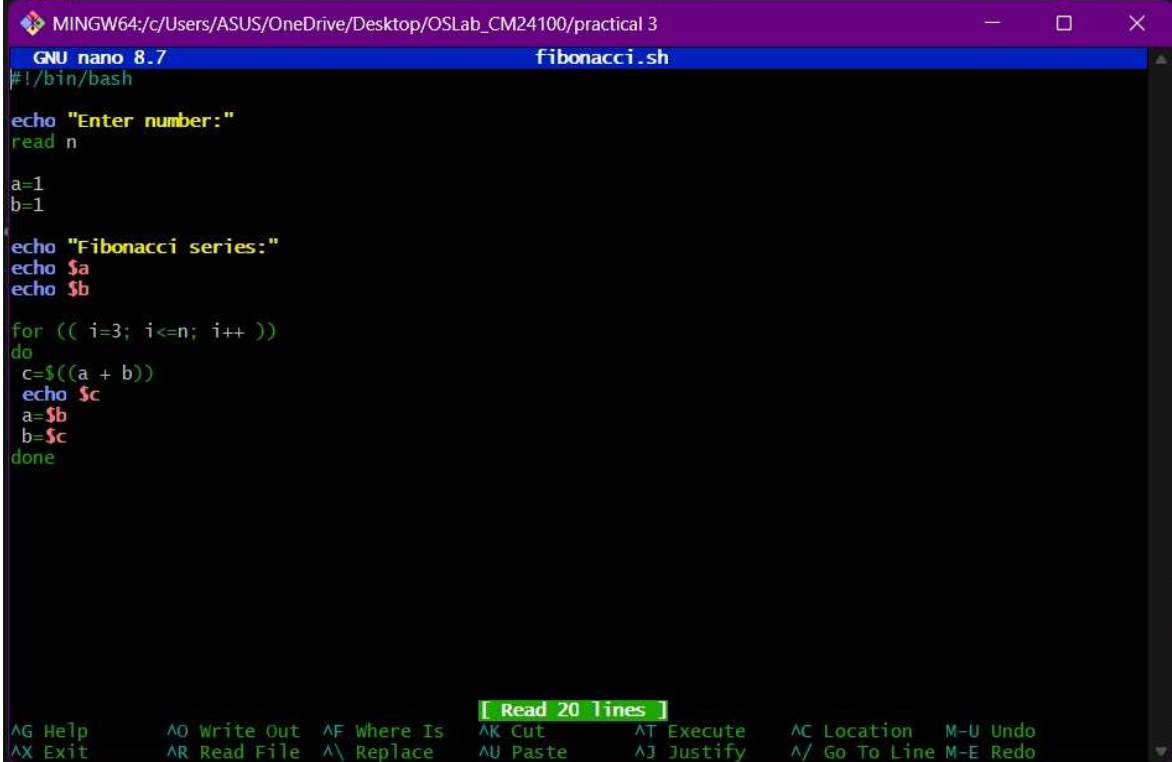
OUTPUT:

A screenshot of a terminal window showing the execution of the menu.sh script. The prompt is ASUS@LAPTOP-4RQNFJ0R MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main). The user enters './menu.sh'. The script displays a menu with four options. The user enters '2'. The script then displays the date and time: 'Mon Jan 26 22:21:08 IST 2026'. The prompt returns to the user.

```
ASUS@LAPTOP-4RQNFJ0R MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$ ./menu.sh
1. Display Calendar
2. Display Date and Time
3. Display Logged in Users
4. Display Terminal Number
Enter choice:
2
Mon Jan 26 22:21:08 IST 2026
ASUS@LAPTOP-4RQNFJ0R MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$ |
```

Q.3. Write a shell script which will generate first n Fibonacci numbers like: 1,2, 3, 5, 13

CODE:



```
MINGW64:/c:/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3
GNU nano 8.7 fibonacci.sh
#!/bin/bash

echo "Enter number:"
read n

a=1
b=1

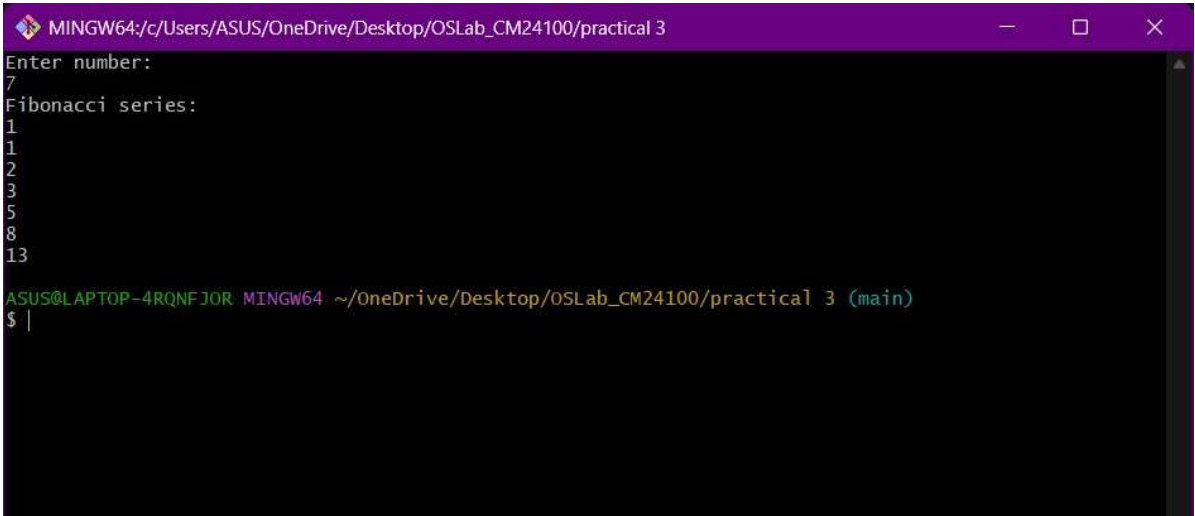
echo "Fibonacci series:"
echo $a
echo $b

for (( i=3; i<=n; i++ ))
do
c=$((a + b))
echo $c
a=$b
b=$c
done
```

Read 20 lines

^G Help ^O Write Out ^F Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^_ Go To Line M-E Redo

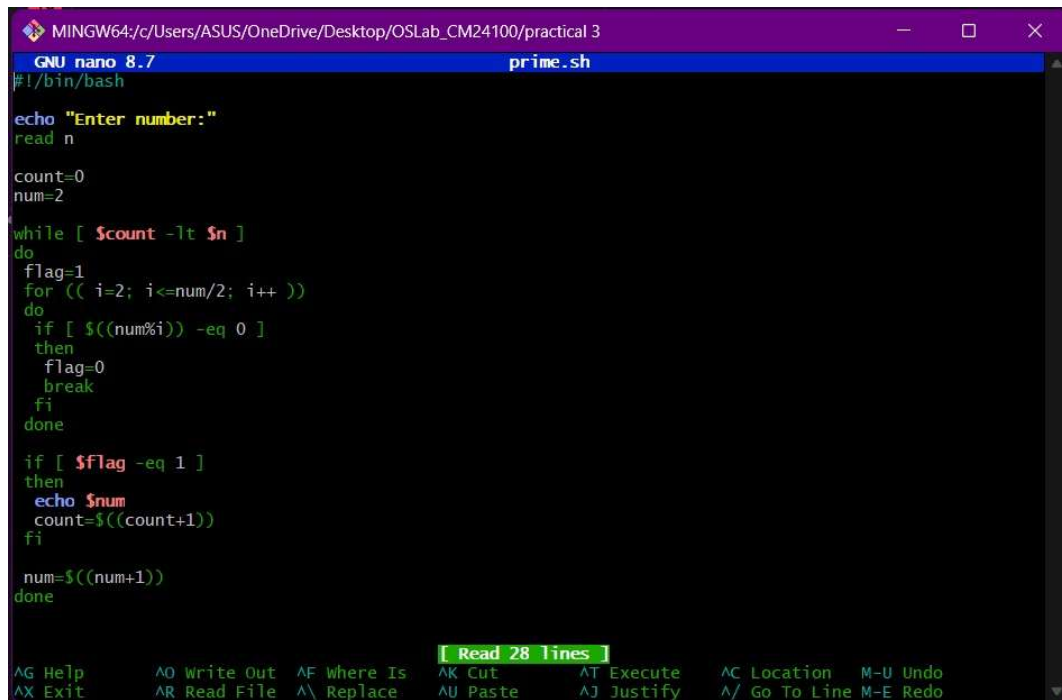
OUTPUT:



```
MINGW64:/c:/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3
Enter number:
7
Fibonacci series:
1
1
2
3
5
8
13
ASUS@LAPTOP-4RQNFJ0R MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$ |
```

4. Write a shell script which will accept a number b and display first n prime numbers as output

CODE:



```
GNU nano 8.7 prime.sh
#!/bin/bash

echo "Enter number:"
read n

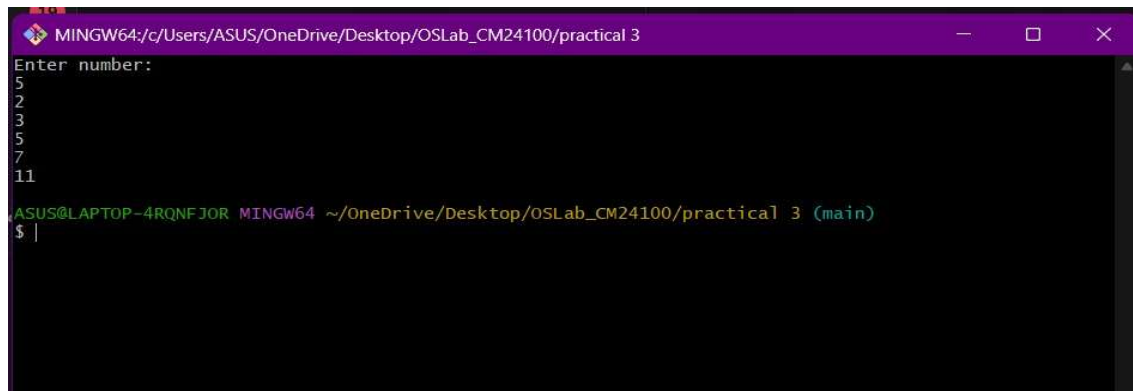
count=0
num=2

while [ $count -lt $n ]
do
    flag=1
    for (( i=2; i<=num/2; i++ ))
    do
        if [ $((num%i)) -eq 0 ]
        then
            flag=0
            break
        fi
    done

    if [ $flag -eq 1 ]
    then
        echo $num
        count=$((count+1))
    fi

    num=$((num+1))
done
```

OUTPUT:



```
Enter number:
5
2
3
5
7
11
ASUS@LAPTOP-4RQNFJ0R MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$ |
```

5. Write menu driven program for file handling activity

- Creation of file
- Write content in the file
- Upend file content
- Delete file content

CODE:

```
MINGW64:/c/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3
GNU nano 8.7 filemenu.sh
#!/bin/bash

echo "1. Create File"
echo "2. Write to File"
echo "3. Append to File"
echo "4. Delete File"
echo "Enter choice:"
read ch

echo "Enter filename:"
read fname

case $ch in
1) touch $fname ;;
2) echo "Enter content:" ; read text ; echo $text > $fname ;;
3) echo "Enter content:" ; read text ; echo $text >> $fname ;;
4) rm $fname ;;
*) echo "Invalid choice" ;;
esac

AG Help      AO Write Out  AF Where Is  AK Cut       AT Execute   AC Location  M-U Undo
AX Exit      AR Read File  A\ Replace   AU Paste     AJ Justify   ^/ Go To Line M-E Redo
```

OUTPUT:

```
MINGW64:/c/Users/ASUS/OneDrive/Desktop/OSLab_CM24100/practical 3
ASUS@LAPTOP-4RQNFJOR MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$ ./filemenu.sh
1. Create File
2. Write to File
3. Append to File
4. Delete File
Enter choice:
1
Enter filename:
test.txt
ASUS@LAPTOP-4RQNFJOR MINGW64 ~/OneDrive/Desktop/OSLab_CM24100/practical 3 (main)
$
```