

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.

```
MINGW64:/c/Users/rahul/OneDrive/Desktop/OS_CD24040
rahul@LAPTOP-NDMMNM2UM MINGW64 ~/OneDrive/Desktop/OS_CD24040 (main)
$ #!/bin/bash

echo "Enter Student Name:"
read name

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

# Calculate total marks
total=$((m1 + m2 + m3))

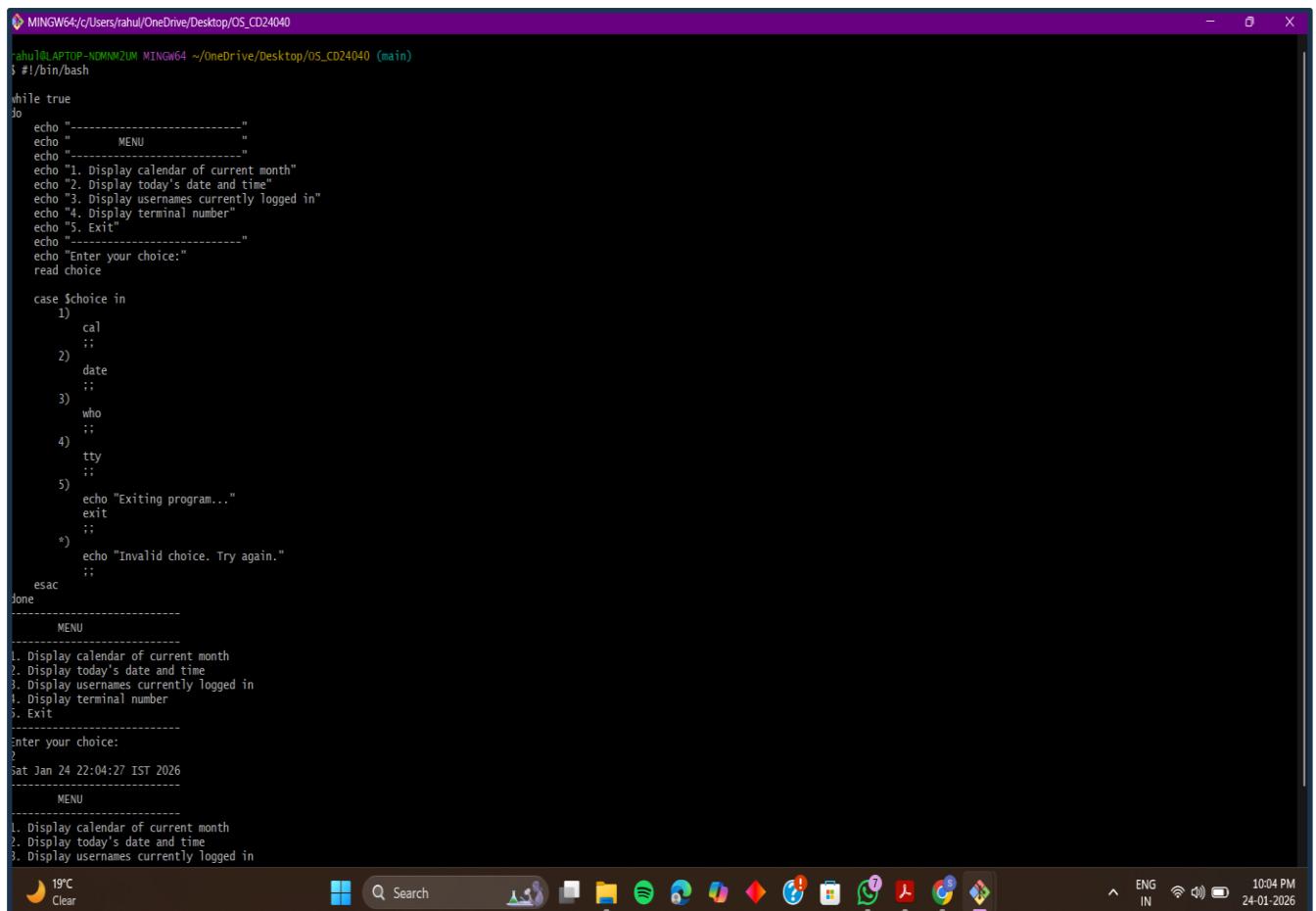
# Calculate percentage
percentage=$((total / 3))

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

# Display Mark Sheet
echo "-----"
echo "      MARK SHEET      "
echo "-----"
echo "Student Name : $name"
echo "Total Marks : $total"
echo "Percentage   : $percentage%"
echo "Class        : $class"
echo "-----"
Enter Student Name:
Sahil Wadekar
Enter marks of Subject 1:
98
Enter marks of Subject 2:
98
Enter marks of Subject 3:
90
-----
      MARK SHEET
-----
Student Name : Sahil Wadekar
Total Marks : 286
Percentage   : 95%
Class        : First Class
-----
```

2. 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
- Display your terminal number



The screenshot shows a Windows desktop environment with a terminal window open in a MINGW64 shell. The terminal displays a menu-driven shell script. The script starts with a while loop that prints a menu and reads user input. It then branches based on the choice: 1) displays the calendar, 2) displays the date and time, 3) displays the current users, 4) displays the terminal number, and 5) exits. If an invalid choice is made, it prints an error message and loops back to the menu. The terminal also shows the current date and time at the bottom.

```
MINGW64/c/Users/rahu/OneDrive/Desktop/OS_CD24040 (main)
$ #!/bin/bash

while true
do
    echo "-----"
    echo "      MENU      "
    echo "-----"
    echo "1. Display calendar of current month"
    echo "2. Display today's date and time"
    echo "3. Display usernames currently logged in"
    echo "4. Display terminal number"
    echo "5. Exit"
    echo "-----"
    echo "Enter your choice:"
    read choice

    case $choice in
        1)
            cal
            ;;
        2)
            date
            ;;
        3)
            who
            ;;
        4)
            tty
            ;;
        5)
            echo "Exiting program..."
            exit
            ;;
        *)
            echo "Invalid choice. Try again."
            ;;
    esac
done
-----
MENU
-----
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display terminal number
5. Exit
-----
Enter your choice:
2
Sat Jan 24 22:04:27 IST 2026
-----
MENU
-----
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently Logged in
```

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

```
MINGW64:/c/Users/rahul/OneDrive/Desktop/OS_CD24040
rahul@LAPTOP-NDNMN2UM MINGW64 ~/OneDrive/Desktop/OS_CD24040 (main)
$#!/bin/bash

echo "Enter value of n:"
read n

a=1
b=1

echo "Fibonacci Series:"
echo -n "$a $b "

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

echo
```

Enter value of n:
6
Fibonacci Series:
1 1 2 3 5 8

```
rahul@LAPTOP-NDNMN2UM MINGW64 ~/OneDrive/Desktop/OS_CD24040 (main)
$ |
```

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

```
MINGW64:/c/Users/rahul/OneDrive/Desktop/OS_CD24040
rahul@LAPTOP-NDNMN2UM MINGW64 ~/OneDrive/Desktop/OS_CD24040 (main)
$#!/bin/bash

echo "Enter value of n:"
read n

count=0
num=2

echo "First $n Prime Numbers:"

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

    num=$((num + 1))
done

echo
```

Enter value of n:
5
First 5 Prime Numbers:
2 3 5 7 11

```
rahul@LAPTOP-NDNMN2UM MINGW64 ~/OneDrive/Desktop/OS_CD24040 (main)
$ |
```

5. Write menu driven program for file handling activity

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

```
rahu1@LAPTOP-NDMMNM2UM MINGW64 ~/OneDrive/Desktop/OS_CD24040 (main)
$#!/bin/bash

echo "Enter file name:"
read filename

while true
do
    echo "-----"
    echo "      FILE HANDLING MENU      "
    echo "-----"
    echo "1. Create File"
    echo "2. Write Content to File"
    echo "3. Append File Content"
    echo "4. Delete File Content"
    echo "5. Exit"
    echo "-----"
    echo "Enter your choice:"
    read choice

    case $choice in
        1)
            touch $filename
            echo "File created successfully."
            ;;
        2)
            echo "Enter content (Press CTRL+D to save):"
            cat > $filename
            ;;
        3)
            echo "Enter content to append (Press CTRL+D to save):"
            cat >> $filename
            ;;
        4)
            > $filename
            echo "File content deleted."
            ;;
        5)
            echo "Exiting program..."
            exit
            ;;
        *)
            echo "Invalid choice. Try again."
            ;;
    esac
done
```

```
done
Enter file name:
Sahil
-----
      FILE HANDLING MENU
-----
1. Create File
2. Write Content to File
3. Append File Content
4. Delete File Content
5. Exit
-----
Enter your choice:
1
File created successfully.
-----
      FILE HANDLING MENU
-----
1. Create File
2. Write Content to File
3. Append File Content
4. Delete File Content
5. Exit
-----
Enter your choice:
2
Enter content (Press CTRL+D to save):
CD24040
-----
      FILE HANDLING MENU
-----
1. Create File
2. Write Content to File
3. Append File Content
4. Delete File Content
5. Exit
-----
Enter your choice:
Invalid choice. Try again.
-----
      FILE HANDLING MENU
-----
1. Create File
2. Write Content to File
3. Append File Content
4. Delete File Content
5. Exit
-----
Enter your choice:
Invalid choice. Try again.
-----
      FILE HANDLING MENU
-----
1. Create File
2. Write Content to File
3. Append File Content
4. Delete File Content
```