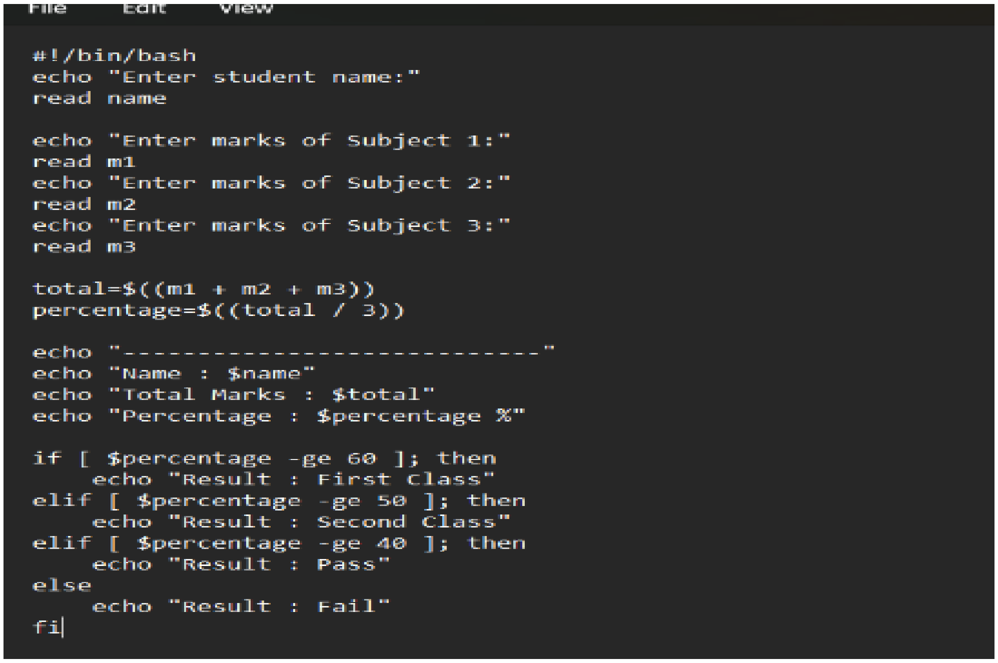
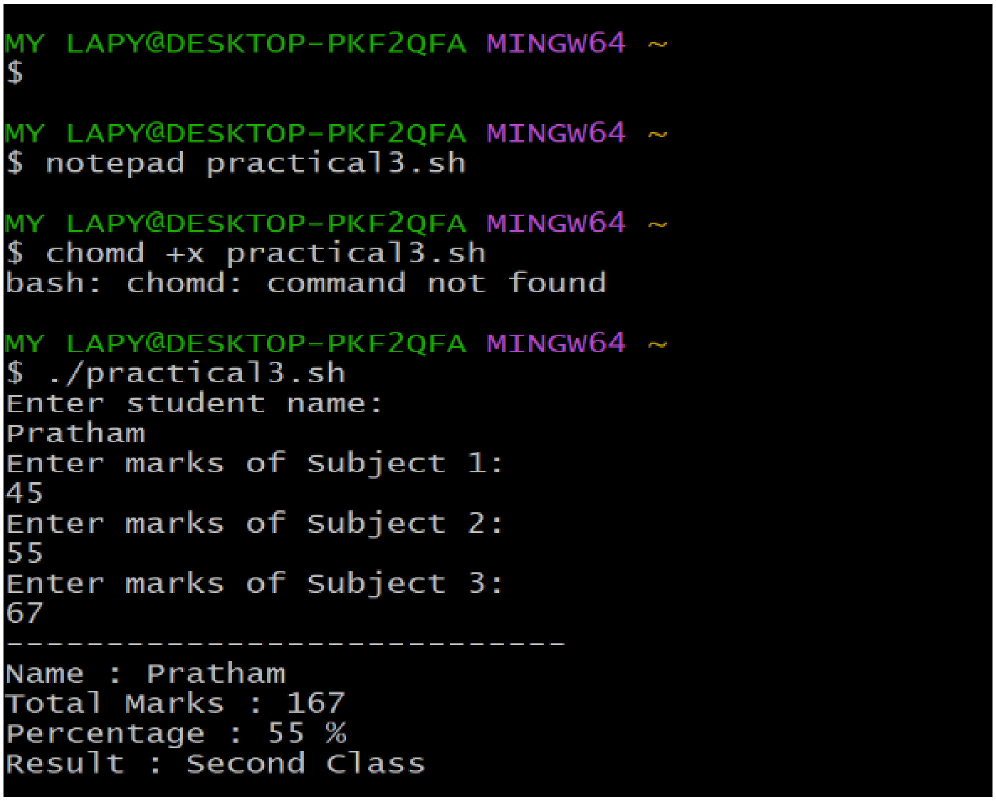
1. Write a shell script to generate mark-sheet of a student. Take 3 subjects, calculate and display total marks, percentage and Class obtained by the student.

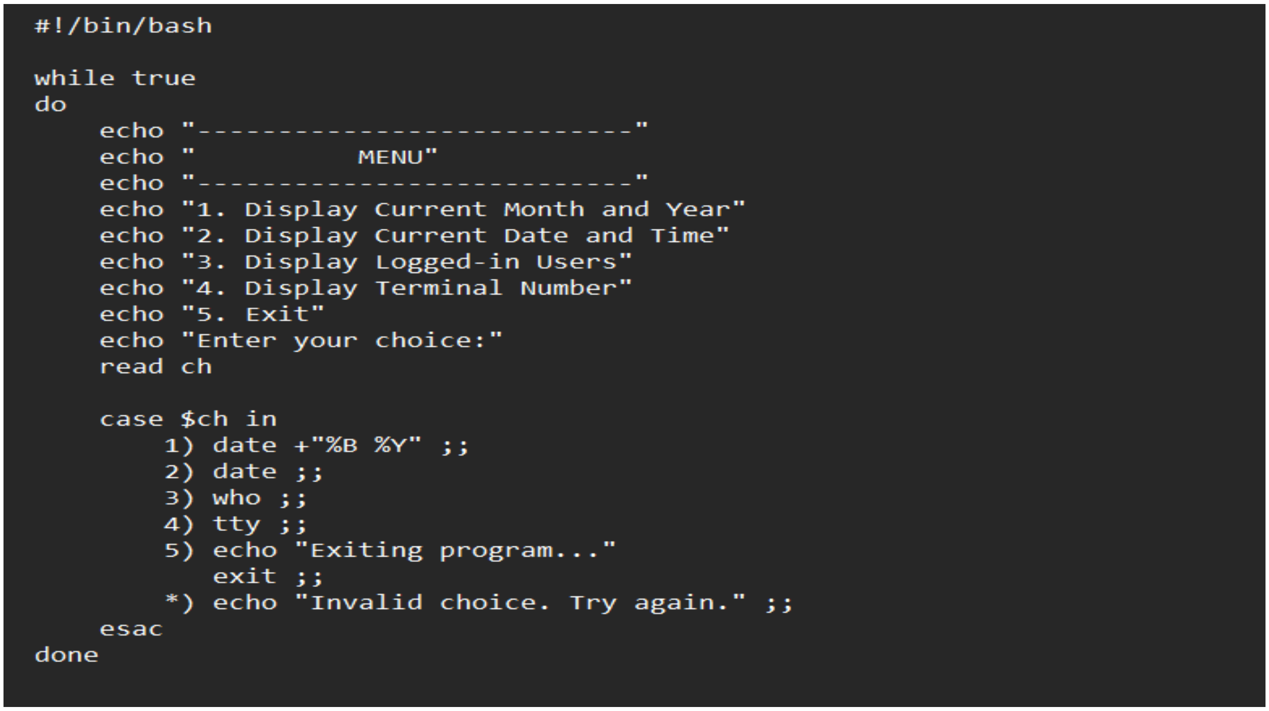


```
#!/bin/bash
echo "Enter student name:"
read name

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

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

echo "----------------------------"
echo "Name : $name"
echo "Total Marks : $total"
echo "Percentage : $percentage %"

if [ $percentage -ge 60 ]; then
    echo "Result : First Class"
elif [ $percentage -ge 50 ]; then
    echo "Result : Second Class"
elif [ $percentage -ge 40 ]; then
    echo "Result : Pass"
else
    echo "Result : Fail"
fi
```



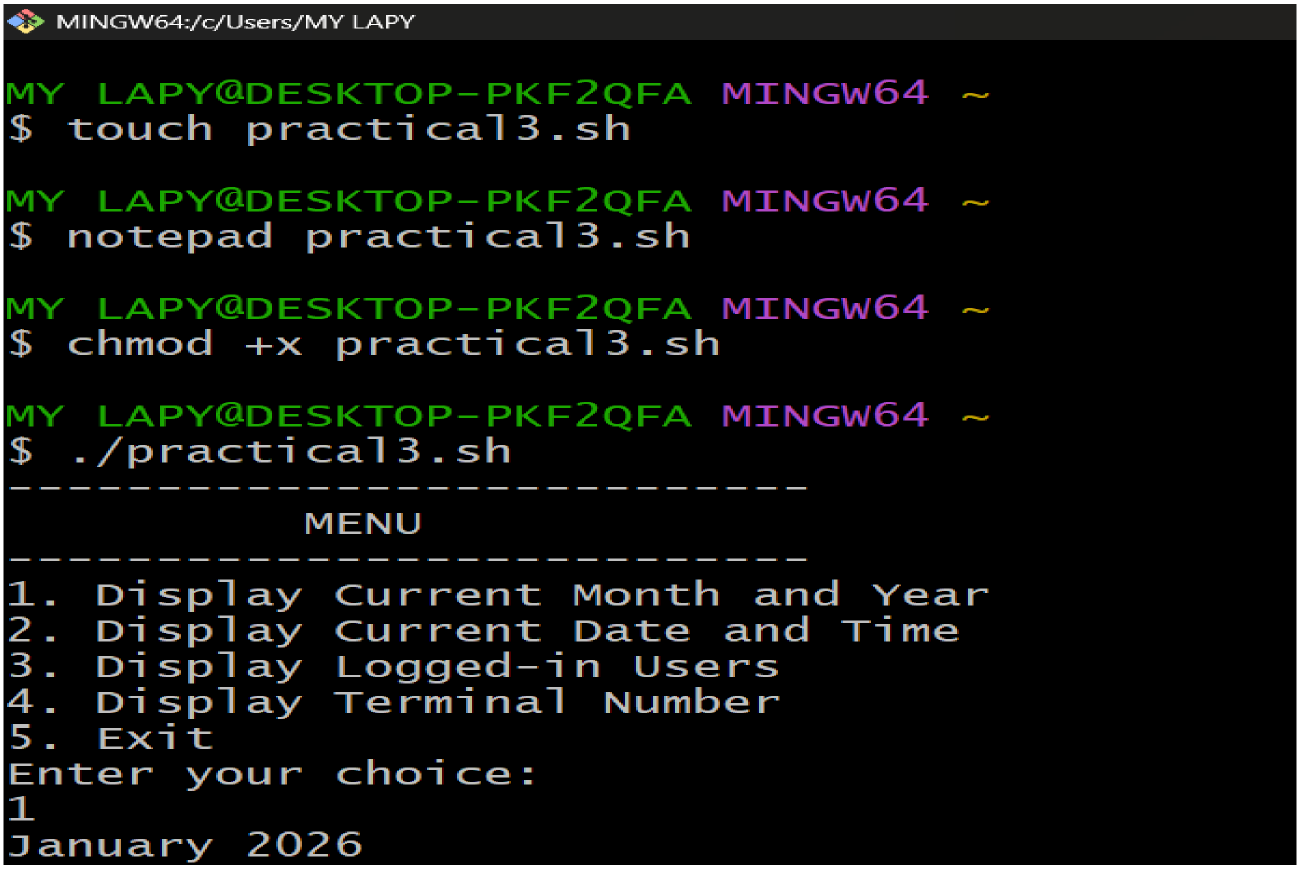
```
MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ notepad practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ chomd +x practical3.sh
bash: chomd: command not found

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
Enter student name:
Pratham
Enter marks of Subject 1:
45
Enter marks of Subject 2:
55
Enter marks of Subject 3:
67
----------------------------
Name : Pratham
Total Marks : 167
Percentage : 55 %
Result : Second Class
```

2. Write a menu driven shell script which will print the following menu and execute the given task.



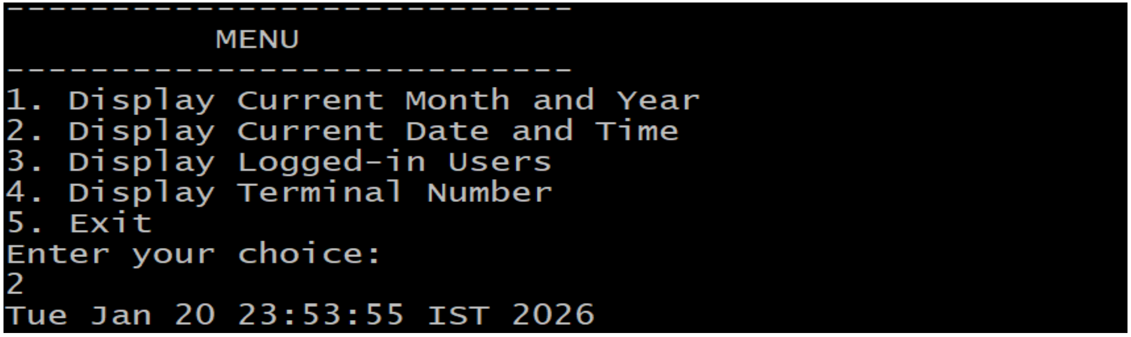
```
#!/bin/bash

while true
do
    echo "----------------------------"
    echo "            MENU"
    echo "----------------------------"
    echo "1. Display Current Month and Year"
    echo "2. Display Current Date and Time"
    echo "3. Display Logged-in Users"
    echo "4. Display Terminal Number"
    echo "5. Exit"
    echo "Enter your choice:"
    read ch

    case $ch in
        1) date +"%B %Y" ;;
        2) date ;;
        3) who ;;
        4) tty ;;
        5) echo "Exiting program..."
           exit ;;
        *) echo "Invalid choice. Try again." ;;
    esac
done
```

- **Display calendar of current month**



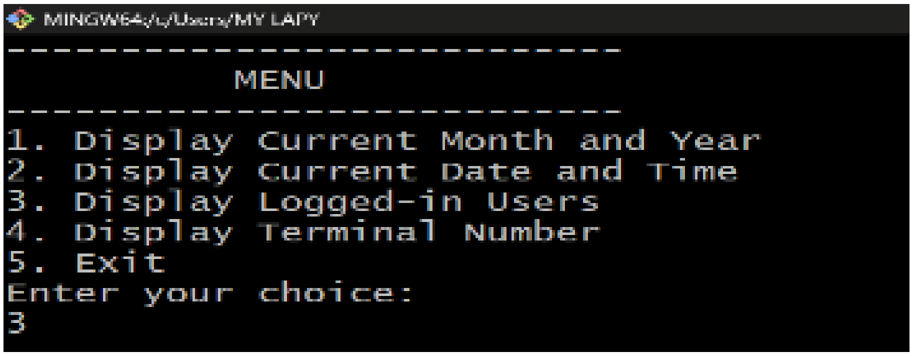
```
MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ touch practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ notepad practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ chmod +x practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
----------------------------
            MENU
----------------------------
1. Display Current Month and Year
2. Display Current Date and Time
3. Display Logged-in Users
4. Display Terminal Number
5. Exit
Enter your choice:
1
January 2026
```

- **Display today's date and time**



```
---------------------------
          MENU
---------------------------
1. Display Current Month and Year
2. Display Current Date and Time
3. Display Logged-in Users
4. Display Terminal Number
5. Exit
Enter your choice:
2
Tue Jan 20 23:53:55 IST 2026
```

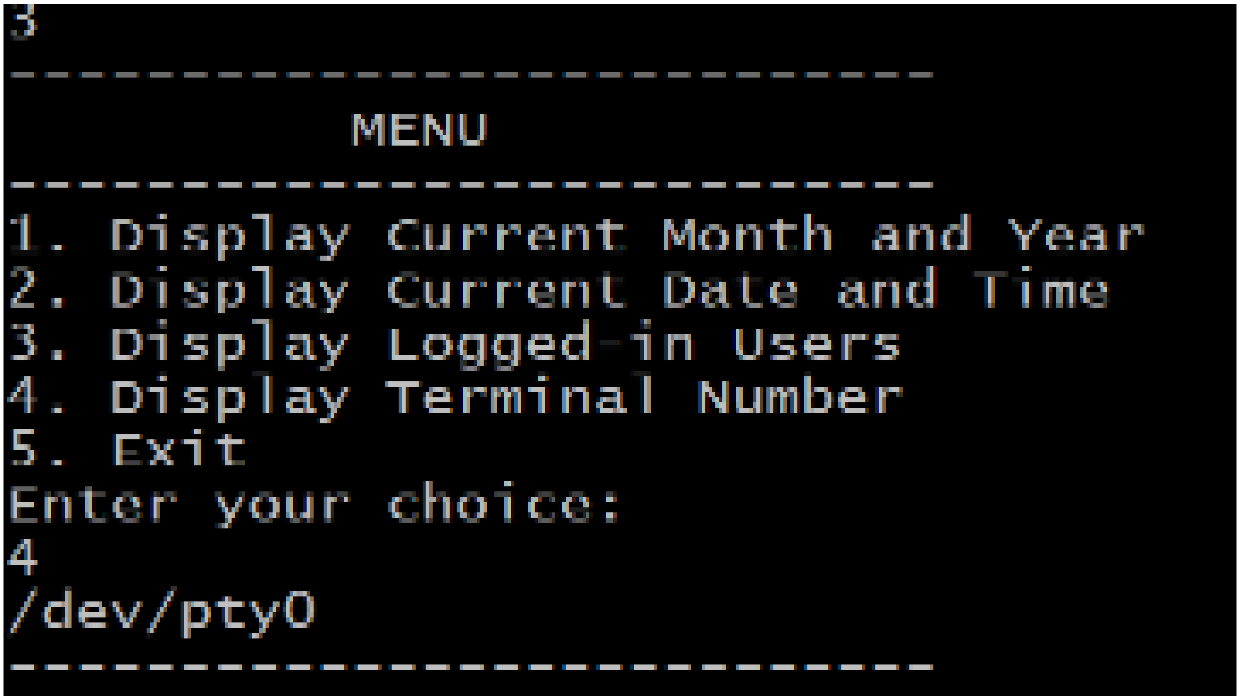
- **Display usernames those are currently logged in the system**



MINGW64:/c/Users/MY LAPY

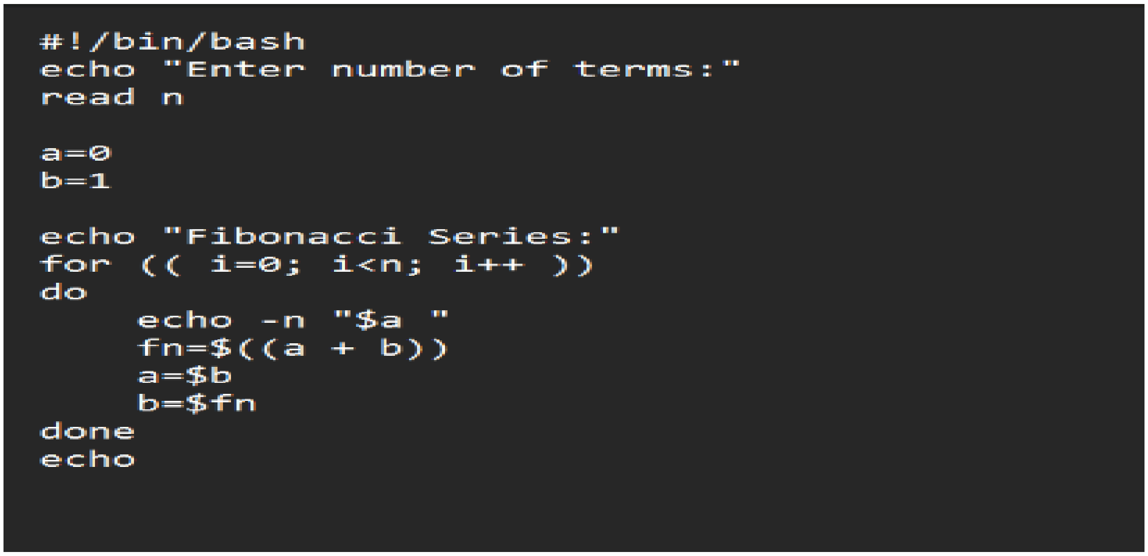
```
---------------------------
          MENU
---------------------------
1. Display Current Month and Year
2. Display Current Date and Time
3. Display Logged-in Users
4. Display Terminal Number
5. Exit
Enter your choice:
3
```

- **Display your terminal number**

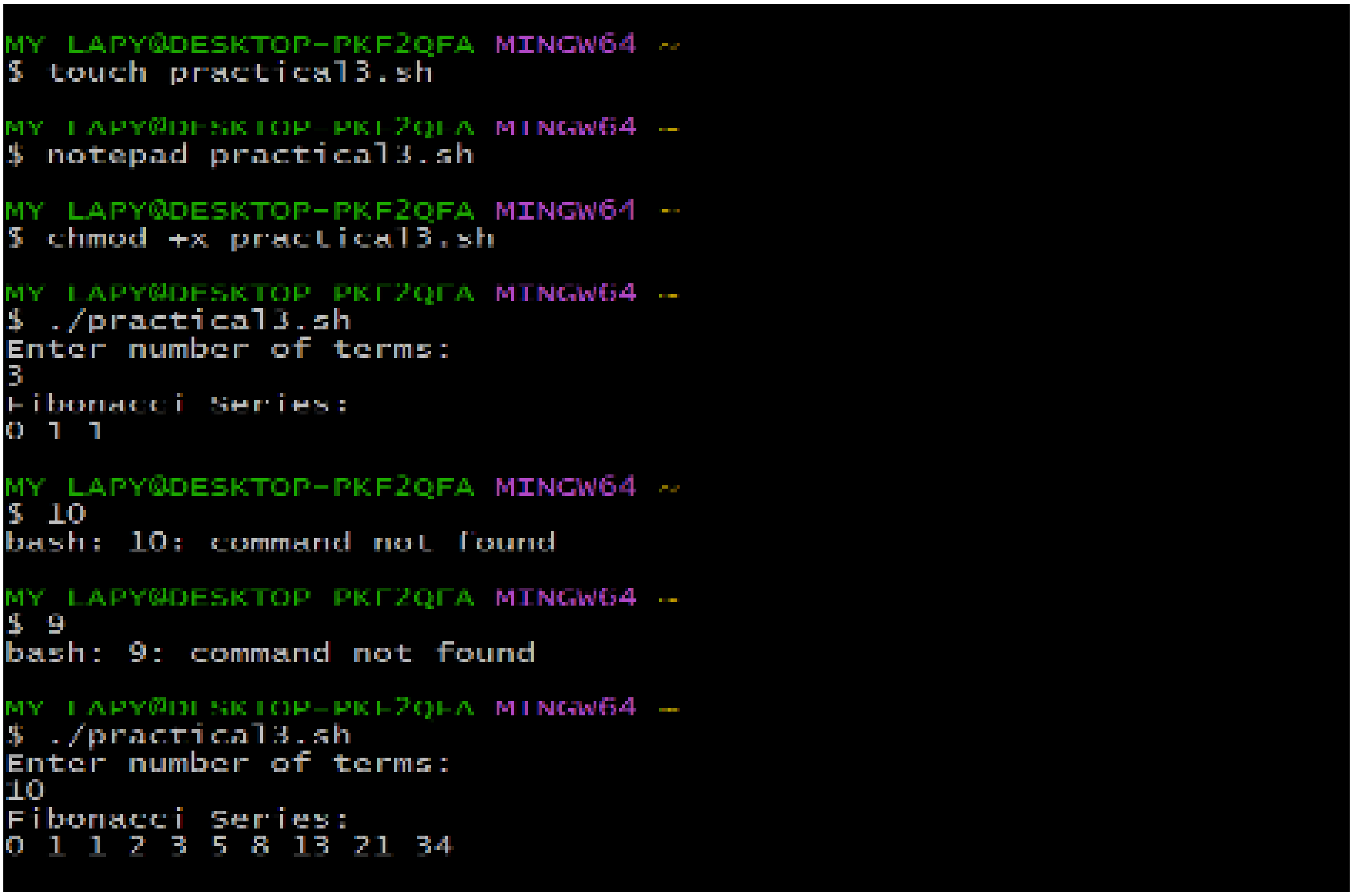


```
3
---------------------------
          MENU
---------------------------
1. Display Current Month and Year
2. Display Current Date and Time
3. Display Logged-in Users
4. Display Terminal Number
5. Exit
Enter your choice:
4
/dev/pty0
---------------------------
```

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

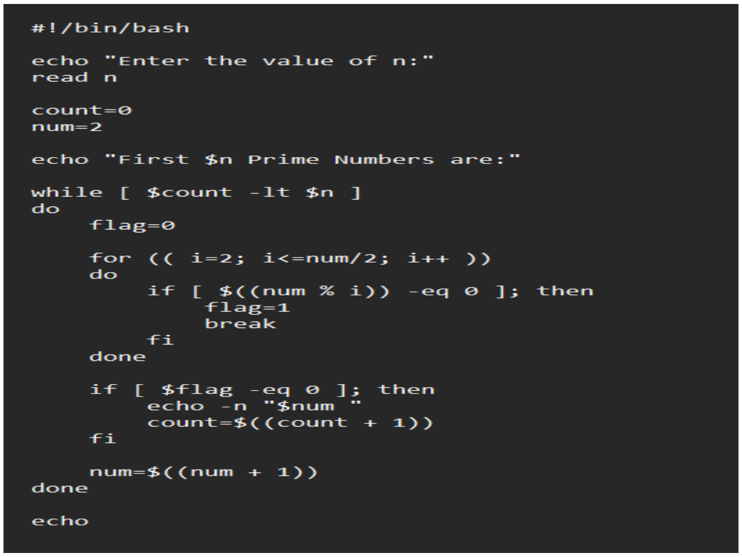


```
#!/bin/bash
echo "Enter number of terms:"
read n

a=0
b=1

echo "Fibonacci Series:"
for (( i=0; i<n; i++ ))
do
    echo -n "$a "
    fn=$((a + b))
    a=$b
    b=$fn
done
echo
```

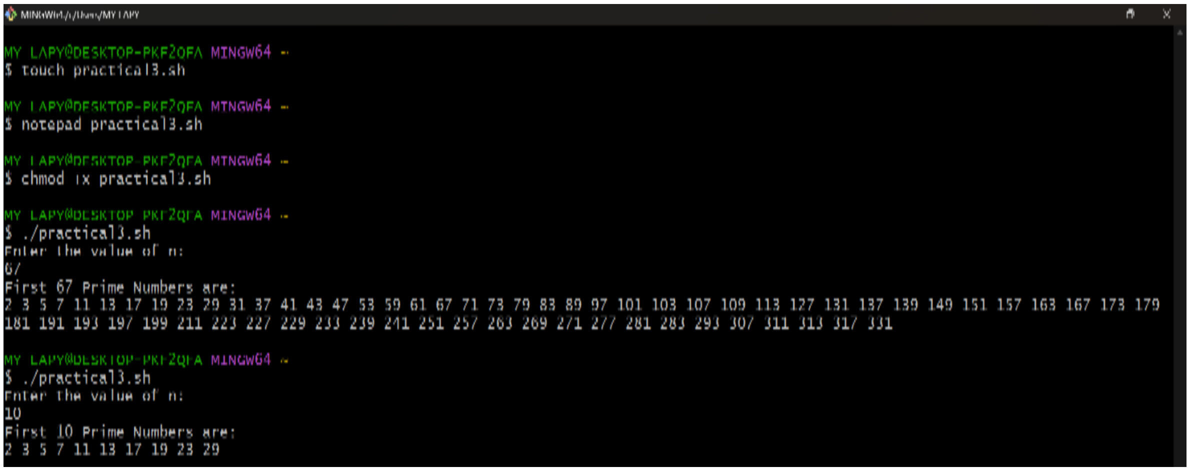


```
MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ touch practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ notepad practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ chmod +x practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
Enter number of terms:
3
Fibonacci Series:
0 1 1

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ 10
bash: 10: command not found

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ 9
bash: 9: command not found

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
Enter number of terms:
10
Fibonacci Series:
0 1 1 2 3 5 8 13 21 34
```

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

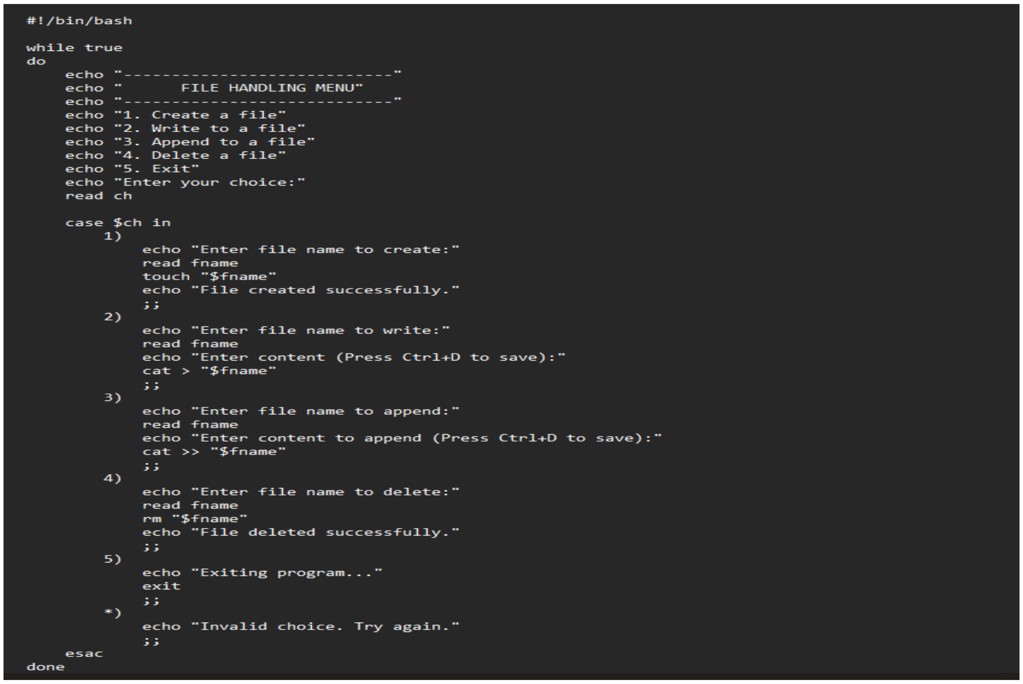


```
#!/bin/bash

echo "Enter the value of n:"
read n

count=0
num=2

echo "First $n Prime Numbers are:"

while [ $count -lt $n ]
do
    flag=0

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

    if [ $flag -eq 0 ]; then
        echo -n "$num "
        count=$((count + 1))
    fi

    num=$((num + 1))
done

echo
```



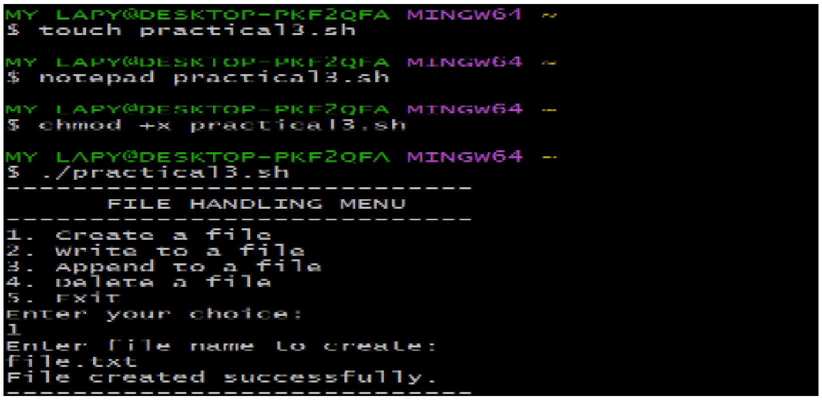
```
MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ touch practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ notepad practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ chmod +x practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
Enter the value of n:
67
First 67 Prime Numbers are:
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 103 107 109 113 127 131 137 139 149 151 157 163 167 173 179
181 191 193 197 199 211 223 227 229 233 239 241 251 257 263 269 271 277 281 283 293 307 311 313 317 331

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
Enter the value of n:
10
First 10 Prime Numbers are:
2 3 5 7 11 13 17 19 23 29
```

5. Write menu driven program for file handling activity



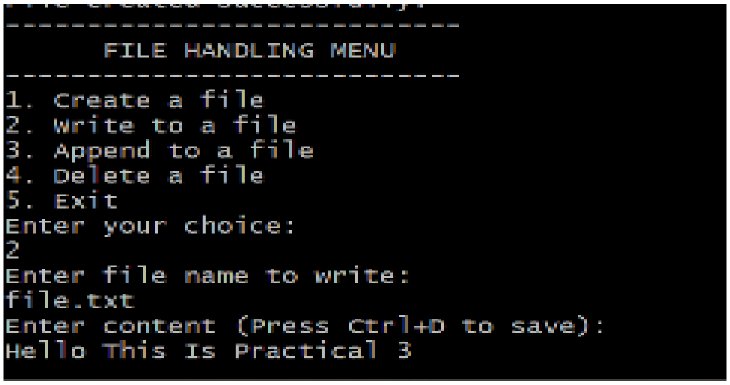
```
#!/bin/bash

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

    case $ch in
        1)
            echo "Enter file name to create:"
            read fname
            touch "$fname"
            echo "File created successfully."
            ;;
        2)
            echo "Enter file name to write:"
            read fname
            echo "Enter content (Press Ctrl+D to save):"
            cat > "$fname"
            ;;
        3)
            echo "Enter file name to append:"
            read fname
            echo "Enter content to append (Press Ctrl+D to save):"
            cat >> "$fname"
            ;;
        4)
            echo "Enter file name to delete:"
            read fname
            rm "$fname"
            echo "File deleted successfully."
            ;;
        5)
            echo "Exiting program..."
            exit
            ;;
        *)
            echo "Invalid choice. Try again."
            ;;
    esac
done
```

- **Creation of file**



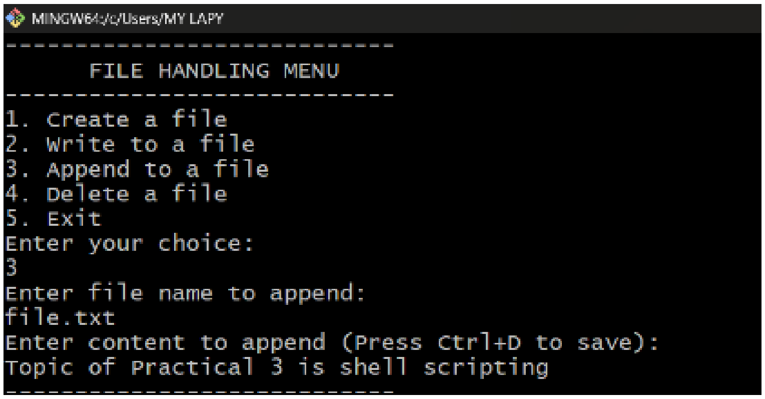
```
MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ touch practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ notepad practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ chmod +x practical3.sh

MY LAPY@DESKTOP-PKF2QFA MINGW64 ~
$ ./practical3.sh
----------------------------
      FILE HANDLING MENU
----------------------------
1. Create a file
2. Write to a file
3. Append to a file
4. Delete a file
5. Exit
Enter your choice:
1
Enter file name to create:
file.txt
File created successfully.
----------------------------
```

- **Write content in the file**



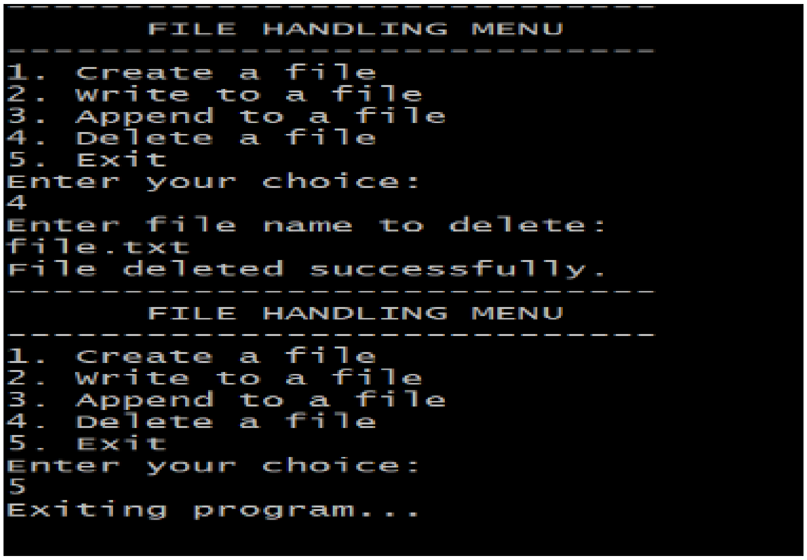
```
File created successfully.
----------------------------
      FILE HANDLING MENU
----------------------------
1. Create a file
2. Write to a file
3. Append to a file
4. Delete a file
5. Exit
Enter your choice:
2
Enter file name to write:
file.txt
Enter content (Press Ctrl+D to save):
Hello This Is Practical 3
```

- **Append file content**



```
----------------------------
      FILE HANDLING MENU
----------------------------
1. Create a file
2. Write to a file
3. Append to a file
4. Delete a file
5. Exit
Enter your choice:
3
Enter file name to append:
file.txt
Enter content to append (Press Ctrl+D to save):
Topic of Practical 3 is shell scripting
----------------------------
```

- **Delete file content**



```
----------------------------
      FILE HANDLING MENU
----------------------------
1. Create a file
2. Write to a file
3. Append to a file
4. Delete a file
5. Exit
Enter your choice:
4
Enter file name to delete:
file.txt
File deleted successfully.
----------------------------
      FILE HANDLING MENU
----------------------------
1. Create a file
2. Write to a file
3. Append to a file
4. Delete a file
5. Exit
Enter your choice:
5
Exiting program...
```