PRACTICAL : 3

Aim: Automate student marksheet generation, system information display, Fibonacci and prime number generation, and file management operations using shell scripts to enhance computational efficiency and user interaction.

a) 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.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash marksheet.sh
Enter Student Name:
Areeba
Enter marks of Subject 1:
92
Enter marks of Subject 2:
88
Enter marks of Subject 3:
79
----------------------
Name: Areeba
Total Marks: 259
Percentage: 86%
Class: Distinction
```

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

1. **Display calendar of current month**
2. **Display today's date and time**
3. **Display usernames those are currently logged in the system**

4. **Display your terminal number**

1.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash system_menu.sh
1. Display current month calendar
2. Display today's date and time
3. Display logged in users
4. Display terminal number
Enter your choice:
1
January 2026
```

2.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash system_menu.sh
1. Display current month calendar
2. Display today's date and time
3. Display logged in users
4. Display terminal number
Enter your choice:
2
Tue Jan 20 22:22:45 IST 2026
```

3.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash system_menu.sh
1. Display current month calendar
2. Display today's date and time
3. Display logged in users
4. Display terminal number
Enter your choice:
3
```

4.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash system_menu.sh
1. Display current month calendar
2. Display today's date and time
3. Display logged in users
4. Display terminal number
Enter your choice:
4
/dev/pty2
```

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

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash fibonacci.sh
Enter number of terms:
1
Fibonacci Series:
0
```

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash fibonacci.sh
Enter number of terms:
2
Fibonacci Series:
0 1
```

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash fibonacci.sh
Enter number of terms:
3
Fibonacci Series:
0 1 1
```

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash fibonacci.sh
Enter number of terms:
5
Fibonacci Series:
0 1 1 2 3
```

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash fibonacci.sh
Enter number of terms:
13
Fibonacci Series:
0 1 1 2 3 5 8 13 21 34 55 89 144
```

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

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash prime.sh
Enter a number:
20
Prime numbers up to 20 are:
2
3
5
7
11
13
17
19
```

e) Write menu driven program for file handling activity

1. **Creation of file**
2. **Write content in the file**
3. **Upend file content**
4. **Delete file content**

1.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash file_menu.sh
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
Enter choice:
1
Enter filename:
student1.txt
```

2.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash file_menu.sh
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
Enter choice:
2
Enter filename:
student1.txt
Enter content:
My name is Areeba
```

3.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash file_menu.sh
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
Enter choice:
3
Enter filename:
student1.txt
Enter content:
Studying shellscripting
```

4.

```
Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ bash file_menu.sh
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
Enter choice:
4
Enter filename:
student1.txt

Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$ cat student1.txt

Haris@LAPTOP-65NO3OIR MINGW64 /d/OS_Lab/shell_practical3 (main)
$
```