

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.

```
GNU nano 8.7 q1_marksheet.sh
#!/bin/bash

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 "Total Marks = $total"
echo "Percentage = $percentage%"

if [ $percentage -ge 75 ]
then
    echo "Class: Distinction"
elif [ $percentage -ge 60 ]
then
    echo "Class: Merit"
else
    echo "Class: Pass"
fi

Write to File: q1_marksheet.sh
^G Help      M-D DOS Format  M-A Append      M-B Backup File ^T Browse
^C Cancel    M-M Mac Format  M-P Prepend     ^Q Discard buffer

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q1_marksheet.sh
Enter marks of Subject 1:
70
Enter marks of Subject 2:
78
Enter marks of Subject 3:
88
Total Marks = 236
Percentage = 78%
Class: Distinction

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ |
```

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

```
GNU nano 8.7                                q2_menu.sh
#!/bin/bash

echo "----- MENU -----"
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 your terminal number"
echo "-----"

echo "Enter your choice:"
read ch

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

- **Display calendar of current month**

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ #!/bin/bash

echo "----- MENU -----"
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 your terminal number"
echo "-----"

echo "Enter your choice:"
read ch

case $ch in
1)
    echo "Current Month & Year:"
    date +"%B %Y"
    ;;
2)
    date
    ;;
3)
    whoami
    ;;
4)
    tty
    ;;
*)
    echo "Invalid choice"
    ;;
esac

----- MENU -----
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
-----
Enter your choice:
1
Current Month & Year:
January 2026
```

- Display today's date and time

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q2_menu.sh
----- MENU -----
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
-----
Enter your choice:
2
Mon Jan 19 20:22:02 IST 2026
```

- Display usernames those are currently logged in the system

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q2_menu.sh
----- MENU -----
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
-----
Enter your choice:
3

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ |
```

- Display your terminal number

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q2_menu.sh
----- MENU -----
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
-----
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

```
GNU nano 8.7 q3_fibonacci.sh
#!/bin/bash

echo "Enter value of n:"
read n

a=0
b=1

echo "Fibonacci Series:"
for (( i=1; i<=n; i++ ))
do
    echo -n "$b "
    fn=$((a + b))
    a=$b
    b=$fn
done

echo

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

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q3_fibonacci.sh
Enter value of n:
5
Fibonacci Series:
1 1 2 3 5

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ |
```

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q3_fibonacci.sh
22
Enter value of n:
22
Fibonacci Series:
1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765 10946 17711
bash: 22: command not found

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ |
```

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

```
GNU nano 8.7                                q4_prime.sh
#!/bin/bash

echo "Enter value of n:"
read n

count=0
num=2

echo "First $n prime numbers are:"

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
```

Wrote 33 lines

^G Help ^O Write Out ^F Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-J To Bracket M-B Previous . Back
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^_ Go To Line M-E Redo M-G Copy M-K Where Was M-F Next . Forward

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ nano q4_prime.sh

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q4_prime.sh
Enter value of n:
55
First 55 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
```

5. Write menu driven program for file handling activity

```
GNU nano 8.7                                q5_file.sh
#!/bin/bash

echo "----- FILE MENU -----"
echo "1. Create file"
echo "2. Write content in file"
echo "3. Append content to file"
echo "4. Delete file content"
echo "-----"

echo "Enter your choice:"
read ch

case $ch in
1)
    echo "Enter filename to create:"
    read fname
    touch $fname
    echo "File '$fname' created."
    ;;
2)
    echo "Enter filename to write content:"
    read fname
    echo "Enter content (Ctrl+D to finish):"
    cat > $fname
    echo "Content written to '$fname'."
    ;;
3)
    echo "Enter filename to append content:"
    read fname
    echo "Enter content to append (Ctrl+D to finish):"
    cat >> $fname
    echo "Content appended to '$fname'."
    ;;
4)
    echo "Enter filename to delete content:"
    read fname
    > $fname
    echo "Content of '$fname' deleted."
    ;;
*)
    echo "Invalid choice"
    ;;
esac

AG Help          AO Write Out    AF Where Is      AK Cut           AT Execute       AC Location      M-U Undo        M-A Set Mark    M-J To Bracket  M-B Previous    . Back
AX Exit          AR Read File    A\ Replace      AU Paste        AJ Justify       A/ Go To Line   M-E Redo        M-6 Copy        AB Where Was    M-F Next        . Forward
```

- Creation of file

```
admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ nano q5_file.sh

admin@DESKTOP-MF8PUSJ MINGW64 ~/Desktop
$ bash q5_file.sh
----- FILE MENU -----
1. Create file
2. Write content in file
3. Append content to file
4. Delete file content
-----
Enter your choice:
1
myfile.txt
Enter filename to create:
File 'myfile.txt' created.
```

- Write content in the file

```
----- FILE MENU -----
1. Create file
2. Write content in file
3. Append content to file
4. Delete file content
-----
Enter your choice:
2
Enter filename to write content:
myfile.txt
Enter content (Ctrl+D to finish):
Hello everyone
this ispractical 3
```

- **Upend file content**

```
----- FILE MENU -----
1. Create file
2. Write content in file
3. Append content to file
4. Delete file content
-----
Enter your choice:
3
Enter filename to append content:
myfile.txt
Enter content to append (Ctrl+D to finish):
Additional content added
```

- **Delete file content**

```
----- FILE MENU -----
1. Create file
2. Write content in file
3. Append content to file
4. Delete file content
-----
Enter your choice:
4
Enter filename to delete content:
myfile.txt
```