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:

```
  GNU nano 8.7                                                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 60 ]
then
  echo "Class: First Class"
elif [ $percentage -ge 50 ]
then
  echo "Class: Second Class"
elif [ $percentage -ge 40 ]
then
  echo "Class: Pass"
else
  echo "Class: Fail"
fi
```

OUTPUT:

```
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop
$ mkdir Shell_Practicals

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop
$ cd Shell_Practicals

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ pwd
/c/Users/Manas/Desktop/Shell_Practicals

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ nano marksheet.sh

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash marksheet.sh
Enter marks of Subject 1:
50
Enter marks of Subject 2:
60
Enter marks of Subject 3:
70
Total Marks = 180
Percentage = 60%
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?

CODE:

```
 GNU nano 8.7                                                menu.sh
#!/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 your choice:"
read ch

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

OUTPUT:

```
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ nano menu.sh

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash menu.sh
1. Display Calendar
2. Display Date and Time
3. Display Logged in Users
4. Display Terminal Number
Enter your choice:
1
January 2026

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash menu.sh
1. Display Calendar
2. Display Date and Time
3. Display Logged in Users
4. Display Terminal Number
Enter your choice:
2
Mon Jan 19 09:34:43 MSTM 2026

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash menu.sh
1. Display Calendar
2. Display Date and Time
3. Display Logged in Users
4. Display Terminal Number
Enter your choice:
```

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

CODE:

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

echo "Enter number:"
read n

a=0
b=1

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

OUTPUT:

```
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ nano fibonacci.sh

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash fibonacci.sh
Enter number of terms:
5
Fibonacci Series:
1 1 2 3 5
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash fibonacci.sh
Enter number of terms:
7
Fibonacci Series:
1 1 2 3 5 8 13
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash fibonacci.sh
Enter number of terms:
9
Fibonacci Series:
1 1 2 3 5 8 13 21 34
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$
```

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

CODE:

```
  GNU nano 8.7
#!/bin/bash

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

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

OUTPUT:

```
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ nano prime.sh

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash prime.sh
Enter how many prime numbers:
5
2 3 5 7 11
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
```

5. Write menu driven program for file handling activity Creation of file. Write content in the file. Upend file content. Delete file content?

CODE:

```
  GNU nano 8.7
#!/bin/bash

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

echo "Enter filename:"
read fname

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

OUTPUT:

```
Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash filemenu.sh
1. Create File
2. Write into File
3. Append into File
4. Delete File Content
Enter your choice:
1
Enter file name:
file.txt

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
$ bash filemenu.sh
1. Create File
2. Write into File
3. Append into File
4. Delete File Content
Enter your choice:
2
Enter file name:
file.txt
Enter text:
hello world

Manas@LAPTOP-U8EOADF2 MINGW64 ~/Desktop/Shell_Practicals
```