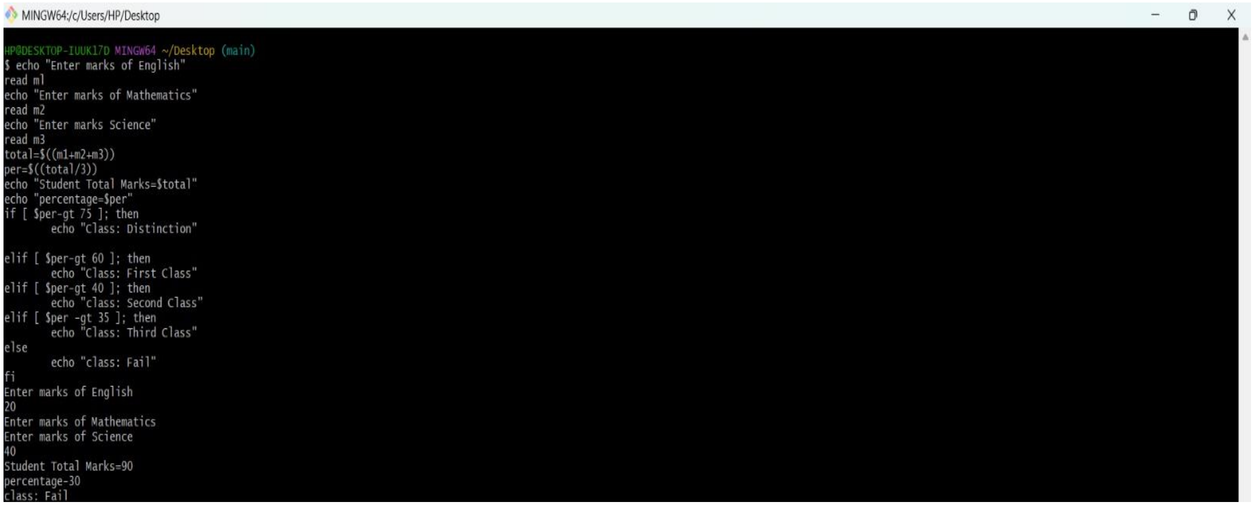
a] Write a shell script to generate mark-sheet of a student. Take 3 subjects, calculate and display total marks, percentage and Class obtained by the student.

Code:

```
echo "Enter marks for Subject 1:"

read m1

echo "Enter marks for Subject 2:"

read m2

echo "Enter marks for Subject 3:"

read m3

total=$((m1 + m2 + m3))

percentage=$((total / 3))

if [ $percentage -ge  60 ]; then

   class="First Class"

elif [ $percentage -ge  50 ]; then

   class="Second Class"

elif [ $percentage -ge  40 ]; then

   class="Pass"

else

   class="Fail"

fi
```

OUTPUT:



```
MINGW64:/c/Users/HP/Desktop

HP@DESKTOP-IUUK17D MINGW64 ~/Desktop (main)
$ echo "Enter marks of English"
read m1
echo "Enter marks of Mathematics"
read m2
echo "Enter marks Science"
read m3
total=$((m1+m2+m3))
per=$((total/3))
echo "Student Total Marks=$total"
echo "percentage=$per"
if [ $per-gt 75 ]; then
        echo "Class: Distinction"

elif [ $per-gt 60 ]; then
        echo "Class: First Class"
elif [ $per-gt 40 ]; then
        echo "class: Second Class"
elif [ $per -gt 35 ]; then
        echo "Class: Third Class"
else
        echo "class: Fail"
fi
Enter marks of English
20
Enter marks of Mathematics
Enter marks of Science
40
Student Total Marks=90
percentage-30
class: Fail
```

b] 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:

echo "1. Display current month calendar"

echo "2. Display today's date and time"

echo "3. Display logged in users"

echo "4. Display terminal number"

echo "Enter your choice:"

read choice

case $choice in

1) cal ;;

2) date ;;

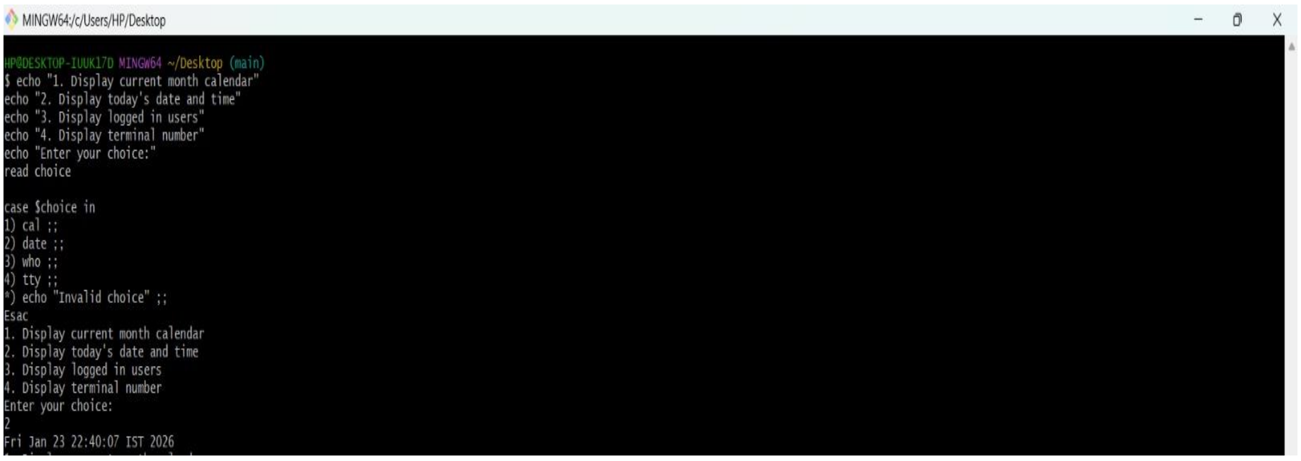
3) who ;;

4) tty ;;

*) echo "Invalid choice" ;;

Esac

OUTPUT:



```
MINGW64:/c/Users/HP/Desktop

HP@DESKTOP-IUUK17D MINGW64 ~/Desktop (main)
$ echo "1. Display current month calendar"
echo "2. Display today's date and time"
echo "3. Display logged in users"
echo "4. Display terminal number"
echo "Enter your choice:"
read choice

case $choice in
1) cal ;;
2) date ;;
3) who ;;
4) tty ;;
*) echo "Invalid choice" ;;
Esac
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
Fri Jan 23 22:40:07 IST 2026
```

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

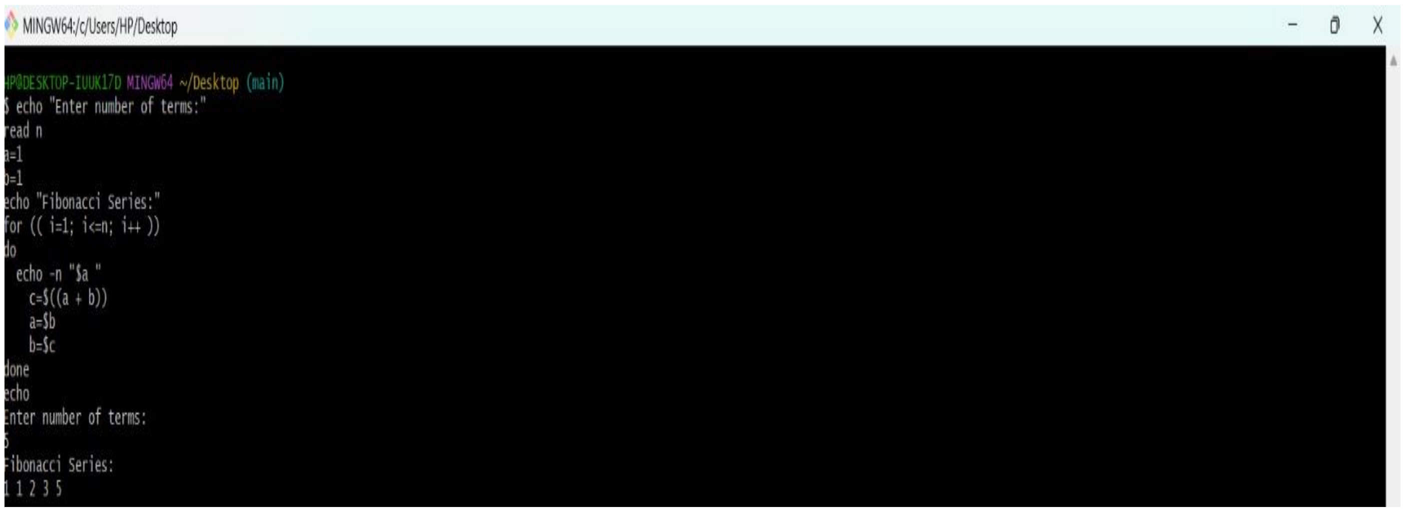
CODE:

echo "Enter number of terms:"

read n

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

OUTPUT:



```
MINGW64:/c/Users/HP/Desktop

HP@DESKTOP-IUUK17D MINGW64 ~/Desktop (main)
$ echo "Enter number of terms:"
read n
a=1
b=1
echo "Fibonacci Series:"
for (( i=1; i<=n; i++ ))
do
  echo -n "$a "
    c=$((a + b))
    a=$b
    b=$c
done
echo
Enter number of terms:
5
Fibonacci Series:
1 1 2 3 5
```

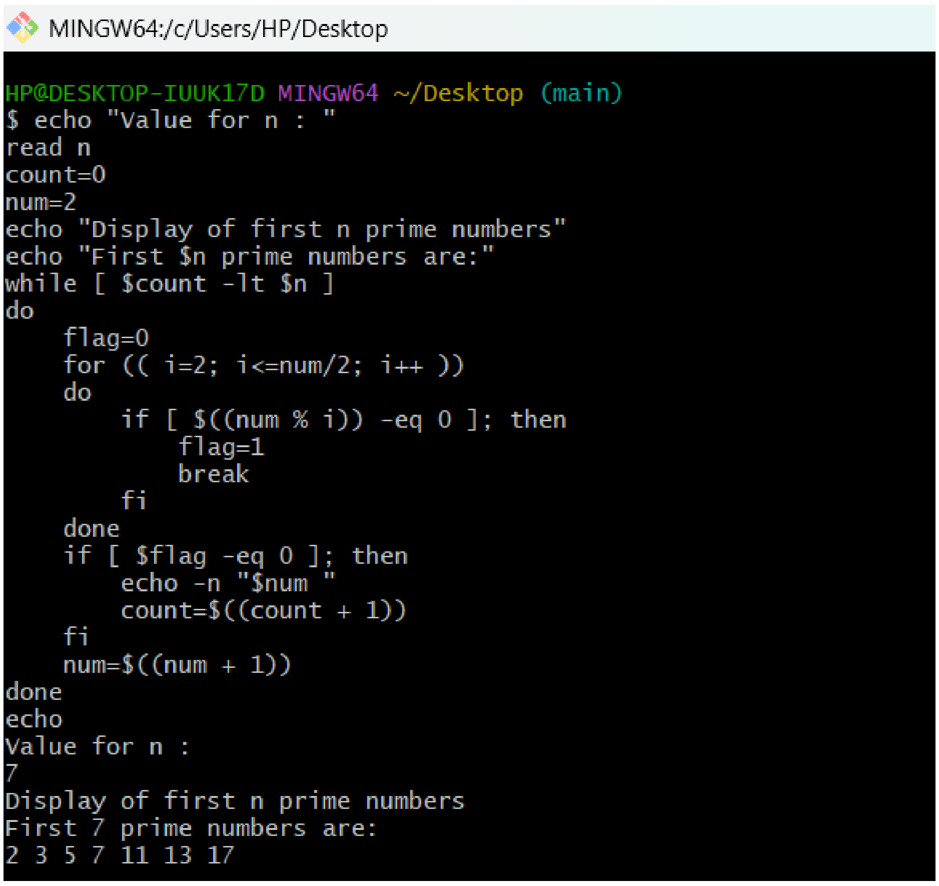
D] Write a shell script which will accept a number *n* and display first *n* prime numbers as output.

CODE:

```
echo "Value for n : "
read n
count=0
```

```
num=2
echo "Display of first n prime numbers"
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
```

OUTPUT:



```
MINGW64:/c/Users/HP/Desktop

HP@DESKTOP-IUUK17D MINGW64 ~/Desktop (main)
$ echo "Value for n : "
read n
count=0
num=2
echo "Display of first n prime numbers"
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
Value for n :
7
Display of first n prime numbers
First 7 prime numbers are:
2 3 5 7 11 13 17
```

e) Write menu driven program for file handling activity

- Creation of file.
- Write content in the file.

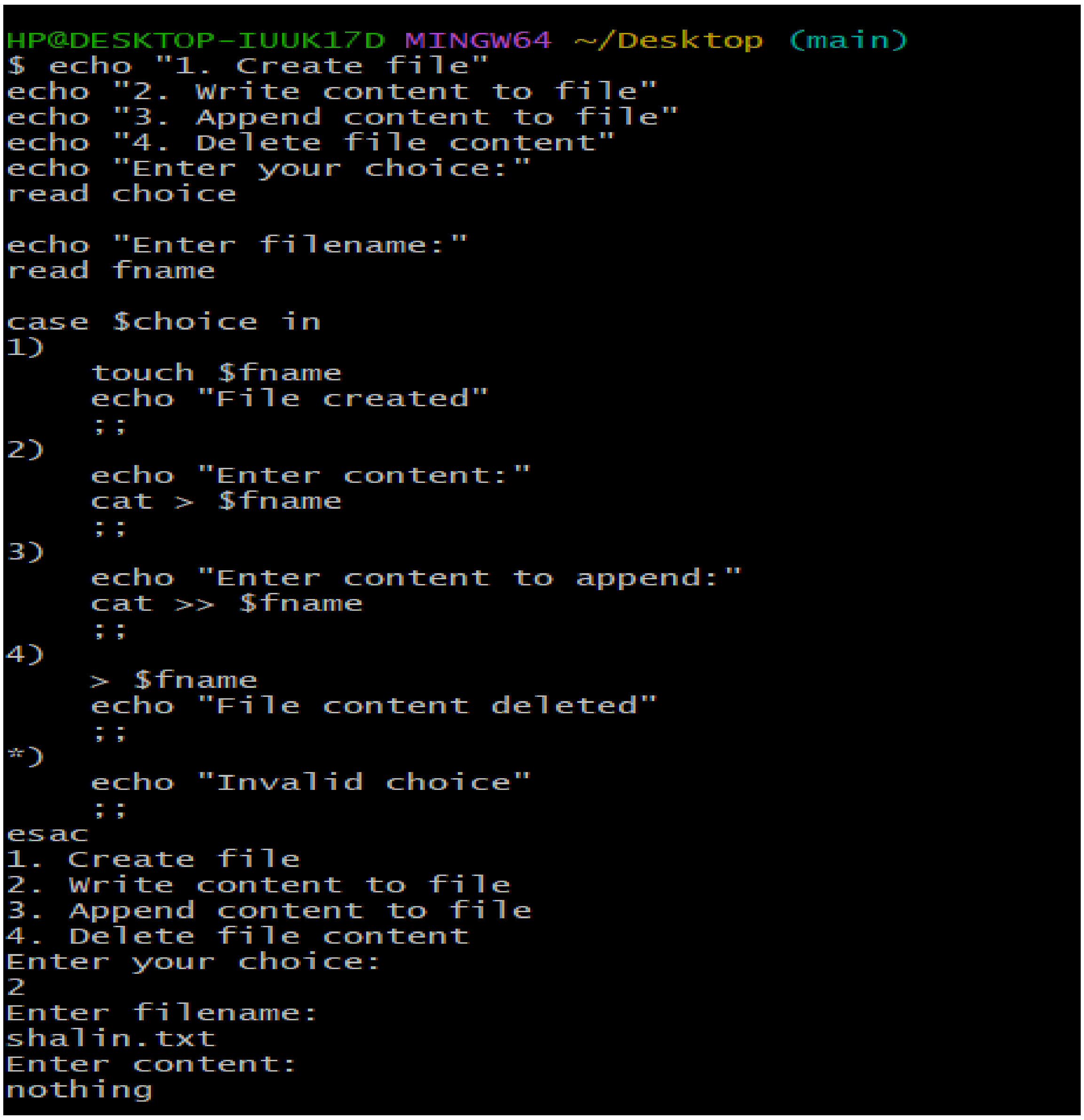
- Upend file content.
- Delete file content.

CODE:

```
echo "1. Create file"
echo "2. Write content to file"
echo "3. Append content to file"
echo "4. Delete file content"
echo "Enter your choice:"
read choice

echo "Enter filename:"
read fname

case $choice in
1)
  touch $fname
  echo "File created"
  ;;
2)
  echo "Enter content:"
  cat > $fname
  ;;
3)
  echo "Enter content to append:"
  cat >> $fname
  ;;
4)
  > $fname
  echo "File content deleted"
  ;;
*)
```

```
    echo "Invalid choice"
    ;;
esac
```

OUTPUT:



```
HP@DESKTOP-IUUK17D MINGW64 ~/Desktop (main)
$ echo "1. Create file"
echo "2. Write content to file"
echo "3. Append content to file"
echo "4. Delete file content"
echo "Enter your choice:"
read choice

echo "Enter filename:"
read fname

case $choice in
1)
        touch $fname
        echo "File created"
        ;;
2)
        echo "Enter content:"
        cat > $fname
        ;;
3)
        echo "Enter content to append:"
        cat >> $fname
        ;;
4)
        > $fname
        echo "File content deleted"
        ;;
*)
        echo "Invalid choice"
        ;;
esac
1. Create file
2. Write content to file
3. Append content to file
4. Delete file content
Enter your choice:
2
Enter filename:
shalin.txt
Enter content:
nothing
```