

OS Practical No. 3

Aim:

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:

```
echo "Enter marks of English"
read m1
echo "Enter marks of Maths"
read m2
echo "Enter marks of science"
read m3
total=$((m1+m2+m3))
percentage=$((total/3))
echo "Student: Total Marks = $total"
echo "Percentage = $percentage"
if [ $percentage -gt 75 ]; then
    echo "Class: Distinction"
elif [ $percentage -gt 60 ]; then
    echo "Class: First Class"
elif [ $percentage -gt 40 ]; then
    echo "Class: Second Class"
elif [ $percentage -gt 35 ]; then
    echo "Class: Third Class"
else
    echo "Class: Fail"
fi
```

Output:

```
"Enter marks of English"
90
"Enter marks of Maths"
95
"Enter marks of science"
80
"Student: Total Marks = 265"
"Percentage = 88"
"Class: Distinction"
```

```
saumyaudgirkar@Saumyas-MacBook-Air ~ % echo "Enter marks of English"
read m1
echo "Enter marks of Maths"
read m2
echo "Enter marks of science"
read m3
total=$((m1+m2+m3))
percentage=$((total/3))
echo "Student: Total Marks = $total"
echo "Percentage = $percentage"
if [ $percentage -gt 75 ]; then
    echo "Class: Distinction"
elif [ $percentage -gt 60 ]; then
    echo "Class: First Class"
elif [ $percentage -gt 40 ]; then
    echo "Class: Second Class"
elif [ $percentage -gt 35 ]; then
    echo "Class: Third Class"
else
    echo "Class: Fail"
fi

"Enter marks of English"
90
"Enter marks of Maths"
95
"Enter marks of science"
80
"Student: Total Marks = 265"
"Percentage = 88"
"Class: Distinction"
saumyaudgirkar@Saumyas-MacBook-Air ~ %
```

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

Code:

```
#!/bin/bash
echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch
case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
```

● **Display calendar of current month**

```
Last login: Fri Jan 23 15:40:11 on ttys000
saumyaudgirkar@Saumyas-MacBook-Air ~ % git --version
git version 2.52.0
saumyaudgirkar@Saumyas-MacBook-Air ~ % #!/bin/bash

echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
#/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
zsh: no such file or directory: #/bin/bash
1) Calendar 2) Date & Time 3) Logged Users 4) Terminal
1
      January 2026
Su Mo Tu We Th Fr Sa
      1  2  3
 4  5  6  7  8  9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31
```

● Display today's date and time

```
● saumyaudgirkar@Saumyas-MacBook-Air ~ %#!/bin/bash
saumyaudgirkar@Saumyas-MacBook-Air ~ % echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
#/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
zsh: no such file or directory: #/bin/bash
1) Calendar 2) Date & Time 3) Logged Users 4) Terminal
2
Fri Jan 23 16:43:02 IST 2026
saumyaudgirkar@Saumyas-MacBook-Air ~ %
```

● Display usernames those are currently logged in the system

```
● saumyaudgirkar@Saumyas-MacBook-Air ~ %#!/bin/bash
saumyaudgirkar@Saumyas-MacBook-Air ~ % echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
#/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
zsh: no such file or directory: #/bin/bash
1) Calendar 2) Date & Time 3) Logged Users 4) Terminal
3
saumyaudgirkar
saumyaudgirkar@Saumyas-MacBook-Air ~ %
```

● Display your terminal number

```
● saumyaudgirkar@Saumyas-MacBook-Air ~ %#!/bin/bash
saumyaudgirkar@Saumyas-MacBook-Air ~ % echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
#/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

echo "1) Calendar 2) Date & Time 3) Logged Users 4) Terminal"
read ch

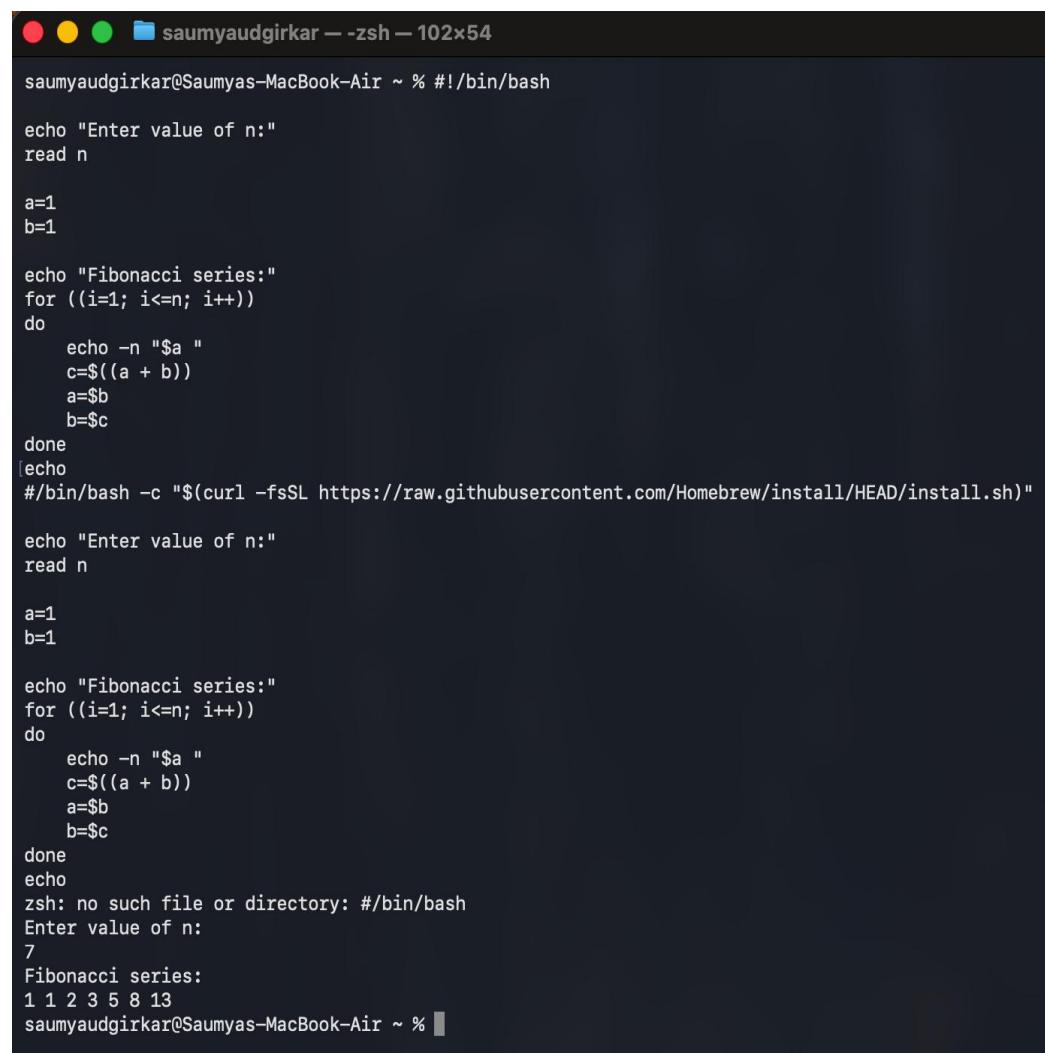
case $ch in
1) cal ;;
2) date ;;
3) who | awk '{print $1}' | uniq ;;
4) tty ;;
*) echo "Invalid choice" ;;
esac
zsh: no such file or directory: #/bin/bash
1) Calendar 2) Date & Time 3) Logged Users 4) Terminal
4
/dev/ttys000
saumyaudgirkar@Saumyas-MacBook-Air ~ %
```

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

Code:

```
#!/bin/bash
echo "Enter value of n:"
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:



```
saumyaudgirkar@Saumyas-MacBook-Air ~ % #!/bin/bash

echo "Enter value of n:"
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
#/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

echo "Enter value of n:"
read n

a=1
b=1

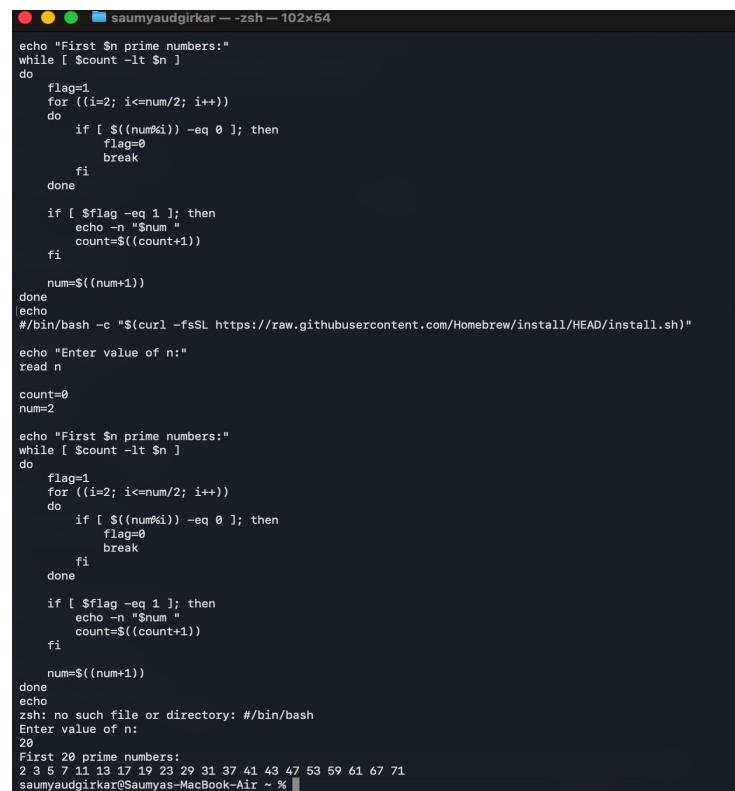
echo "Fibonacci series:"
for ((i=1; i<=n; i++))
do
    echo -n "$a "
    c=$((a + b))
    a=$b
    b=$c
done
echo
zsh: no such file or directory: #/bin/bash
Enter value of n:
7
Fibonacci series:
1 1 2 3 5 8 13
saumyaudgirkar@Saumyas-MacBook-Air ~ %
```

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

Code:

```
#!/bin/bash
echo "Enter value of n:"
read n
count=0
num=2
echo "First $n prime numbers:"
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
```

Output:

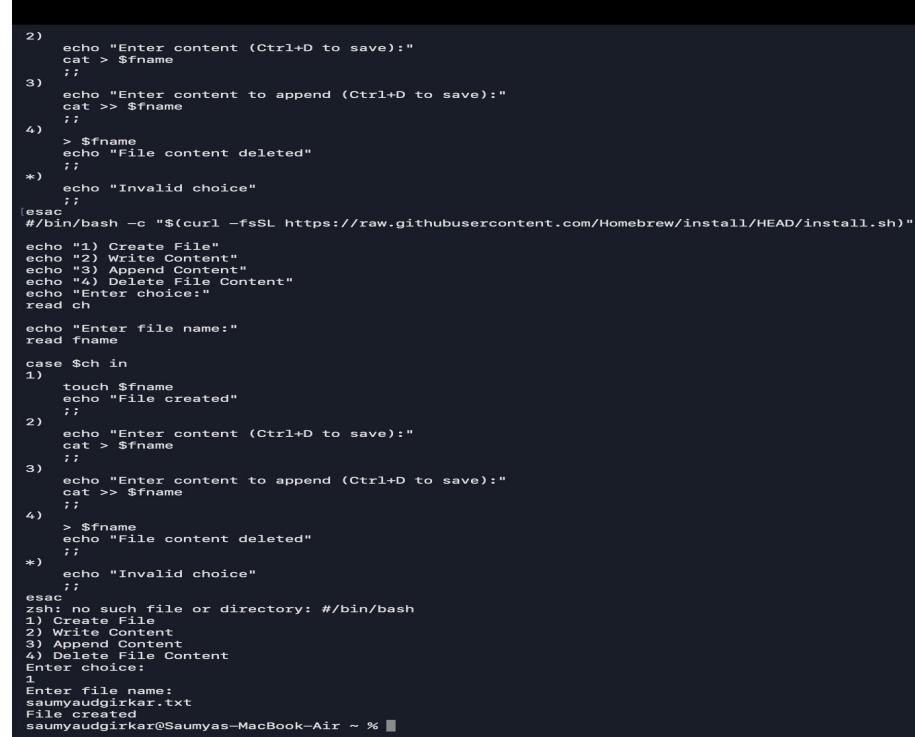


```
saumyaudgirkar ~ zsh 102x54
echo "First $n prime numbers:"
while [ $count -lt $n ]
do
    flag=1
    for ((i=2; i<=num/2; i++))
    do
        if [ $((num%i)) -eq 0 ]; then
            flag=0
            break
        fi
    done
    if [ $flag -eq 1 ]; then
        echo -n "$num "
        count=$((count+1))
    fi
    num=$((num+1))
done
echo
#!/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
echo "Enter value of n:"
read n
count=0
num=2
echo "First $n prime numbers:"
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
zsh: no such file or directory: #!/bin/bash
Enter value of n:
20
First 20 prime numbers:
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71
saumyaudgirkar@Saumya-MacBook-Air ~ %
```

5. Write menu driven program for file handling activity

```
#!/bin/bash
echo "1) Create File"
echo "2) Write Content"
echo "3) Append Content"
echo "4) Delete File Content"
echo "Enter choice:"
read ch
echo "Enter file name:"
read fname
case $ch in
1)
    touch $fname
    echo "File created" ;;
2)
    echo "Enter content (Ctrl+D to save):"
    cat > $fname ;;
3)
    echo "Enter content to append (Ctrl+D to save):"
    cat >> $fname ;;
4)
    > $fname
    echo "File content deleted" ;;
*)
    echo "Invalid choice" ;;
esac
```

● Creation of file



```
2) echo "Enter content (Ctrl+D to save):"
cat > $fname
;;
3) echo "Enter content to append (Ctrl+D to save):"
cat >> $fname
;;
4) > $fname
echo "File content deleted"
;;
*) echo "Invalid choice"
;;
[esac
#bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
echo "1) Create File"
echo "2) Write Content"
echo "3) Append Content"
echo "4) Delete File Content"
echo "Enter choice:"
read ch
echo "Enter file name:"
read fname
case $ch in
1)
    touch $fname
    echo "File created"
    ;;
2)
    echo "Enter content (Ctrl+D to save):"
    cat > $fname
    ;;
3)
    echo "Enter content to append (Ctrl+D to save):"
    cat >> $fname
    ;;
4)
    > $fname
    echo "File content deleted"
    ;;
*)
    echo "Invalid choice"
    ;;
esac
ls: no such file or directory: #bin/bash
1) Create File
2) Write Content
3) Append Content
4) Delete File Content
Enter choice:
4
Enter file name:
saumyaudgirkar.txt
File created
saumyaudgirkar@Saumyas-MacBook-Air ~ %
```

● Write content in the file

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

echo "Enter file name:"
read fname

case $ch in
1)
    touch $fname
    echo "File created"
;;
2)
    echo "Enter content (Ctrl+D to save):"
    cat > $fname
;;
3)
    echo "Enter content to append (Ctrl+D to save):"
    cat >> $fname
;;
4)
    > $fname
    echo "File content deleted"
;;
*)
    echo "Invalid choice"
;;
esac
zsh: no such file or directory: #/bin/bash
1) Create File
2) Write Content
3) Append Content
4) Delete File Content
Enter choice:
2
Enter file name:
saumyaudgirkar.txt
Enter content (Ctrl+D to save):
MY NAME IS SAUMYA
saumyaudgirkar@Saumyas-MacBook-Air ~ % █
```

● Upend file content

```
;;
[esac
#/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

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

echo "Enter file name:"
read fname

case $ch in
1)
    touch $fname
    echo "File created"
;;
2)
    echo "Enter content (Ctrl+D to save):"
    cat > $fname
;;
3)
    echo "Enter content to append (Ctrl+D to save):"
    cat >> $fname
;;
4)
    > $fname
    echo "File content deleted"
;;
*)
    echo "Invalid choice"
;;
esac
zsh: no such file or directory: #/bin/bash
1) Create File
2) Write Content
3) Append Content
4) Delete File Content
Enter choice:
3
Enter file name:
saumyaudgirkar.txt
Enter content to append (Ctrl+D to save):
saumyaudgirkar@Saumyas-MacBook-Air ~ % █
```

- **Delete file content**

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

echo "Enter file name:"
read fname

case $ch in
1)
    touch $fname
    echo "File created"
    ;;
2)
    echo "Enter content (Ctrl+D to save):"
    cat > $fname
    ;;
3)
    echo "Enter content to append (Ctrl+D to save):"
    cat >> $fname
    ;;
4)
    > $fname
    echo "File content deleted"
    ;;
*) 
    echo "Invalid choice"
    ;;
esac
zsh: no such file or directory: #/bin/bash
1) Create File
2) Write Content
3) Append Content
4) Delete File Content
Enter choice:
4
Enter file name:
saumyaudgirkar.txt
MY NAME IS SAUMYA
```