

U19EC046 | OS | LAB 3

Solution #1

```
#!/bin/bash

echo "Enter 1 for logged in users"
echo "Enter 2 for getting Calender"
echo "Enter 3 for todays date"
read -p "Enter your choice: " choice

case $choice in
    "1")
        w
        ;;
    "2")
        cal
        ;;
    "3")
        date
        ;;
    *)
        echo "Invalid input"
esac
```

Output #1

```
harsh@harsh-VirtualBox:~/Desktop$ sudo ./sol1.sh
[sudo] password for harsh:
Enter 1 for logged in users
Enter 2 for getting Calender
Enter 3 for todays date
Enter your choice: 1
 17:43:16 up 12 min,  1 user,  load average: 0.28, 0.23, 0.14
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
harsh     tty7     :0               17:30    12:31  30.93s  0.19s  xfce4-session
harsh@harsh-VirtualBox:~/Desktop$ sudo ./sol1.sh
Enter 1 for logged in users
Enter 2 for getting Calender
Enter 3 for todays date
Enter your choice: 2
      August 2021
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
harsh@harsh-VirtualBox:~/Desktop$ sudo ./sol1.sh
Enter 1 for logged in users
Enter 2 for getting Calender
Enter 3 for todays date
Enter your choice: 3
Mon Aug 23 17:43:27 IST 2021
```

Solution 2

```
if [ -f $1 ];
then
    echo "$1 is a file"
elif [ -d $1 ];
then
    echo "$1 is a directory"
fi
read -p "press any key to continue"
```

Output 2

```
./ is a directory
press any key to continue
```

```
./sol2.sh is a file
press any key to continue
```

Solution 3

```
DIRPATH=$1
echo "Number of files: "
find $DIRPATH -type f | wc -l
read -p "Press enter to continue"
```

Output 3

```
$ ./sol3.sh "/"
Number of files:
10
Press enter to continue
```

Solution 4

```
FILE1PATH=$1
FILE2PATH=$2

if [ -f $FILE1PATH ]
then
    echo "File $FILE1PATH exists"
    if [ -f $FILE2PATH ]
    then
        echo "File $FILE2PATH exists"
        echo "Overwriting file $FILE2PATH"
        cp $FILE1PATH $FILE2PATH
    else
        echo "File $FILE2PATH does not exists"
        echo "Creating file $FILE2PATH"
        echo "Copying file $FILE1PATH to $FILE2PATH"
        cp $FILE1PATH $FILE2PATH
    fi
else
    echo "File $FILE1PATH does not exists"
fi
read -p "Press any key to continue..."
```

Before

- lab3
 - sol1.png
 - sol1.sh
 - sol2.sh
 - sol3.sh
 - sol4.sh
 - sol5.sh
 - sol6.sh
 - sol7.sh
 - sol8_test.txt
 - sol8.sh

```
$ ./sol4.sh "./sol1.png" "./sol1_copy.png"
File ./sol1.png exists
File ./sol1_copy.png does not exists
Creating file ./sol1_copy.png
Copying file ./sol1.png to ./sol1_copy.png
Press any key to continue...
```

After

- lab3
 - sol1_copy.png
 - sol1.png
 - sol1.sh
 - sol2.sh
 - sol3.sh
 - sol4.sh
 - sol5.sh
 - sol6.sh
 - sol7.sh
 - sol8_test.txt
 - sol8.sh

Solution 5

Output 5

```
NUM=$1
FACT=1
while [ $NUM -gt 1 ]
do
    FACT=$((FACT*NUM))
    NUM=$((NUM-1))
done

echo "Factorial of $NUM is $FACT"
read -p "Press any key to continue..."
```

```
$ ./sol5.sh 5
Factorial of 1 is 120
Press any key to continue...
```

Solution 6

Output 6

```
N=$1
A=0
B=1
echo "Fibonacci Series upto $N terms:"
for ((i=0;i<N;i++))
do
    echo -n "$A "
    TEMP=$((A+B))
    A=$B
    B=$TEMP
done
read -p "Press any key to continue..."
```

```
$ ./sol6.sh 10
Fibonacci Series upto 10 terms:
0 1 1 2 3 5 8 13 21 34 Press any key to continue...
```

Solution 7

Output 7

```
NUM1=$1
NUM2=$2

for (( i=$NUM1; i<=$NUM2; i++ ))
do
    if [ $((i%2)) -eq 0 ]
    then
        echo $i
    fi
done
read -p "Press any key to continue..."
```

```
$ ./sol7.sh 10 25
10
12
14
16
18
20
22
24
Press any key to continue...
```

Solution 8

Output 8

```
FILEPATH=$1
echo "Contents of $1"
echo "-----"
cat $FILEPATH
echo "-----"
echo "Number of characters: " $(wc -m $FILEPATH)
echo "Number of words: " $(wc -w $FILEPATH)
echo "Number of lines: " $(wc -l $FILEPATH)
echo "-----"
read -p "Press any key to continue..."
```

```
$ ./sol8.sh "./sol8_test.txt"
Contents of ./sol8_test.txt
-----
hello
i am just a test file
you can play around with me
-----
Number of characters: 59 ./sol8_test.txt
Number of words: 13 ./sol8_test.txt
Number of lines: 3 ./sol8_test.txt
-----
Press any key to continue...
```