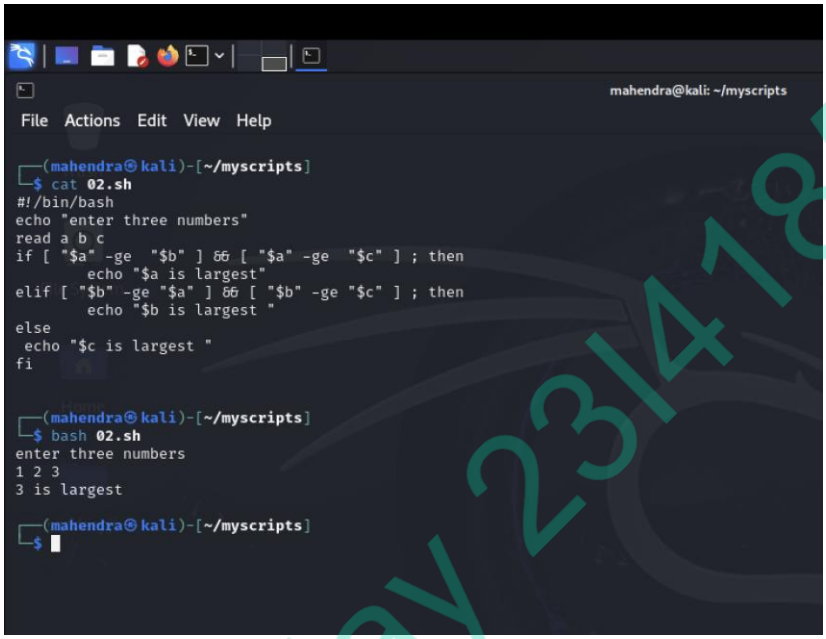
4ITRC2 Operating System Lab

Lab Assignment 3

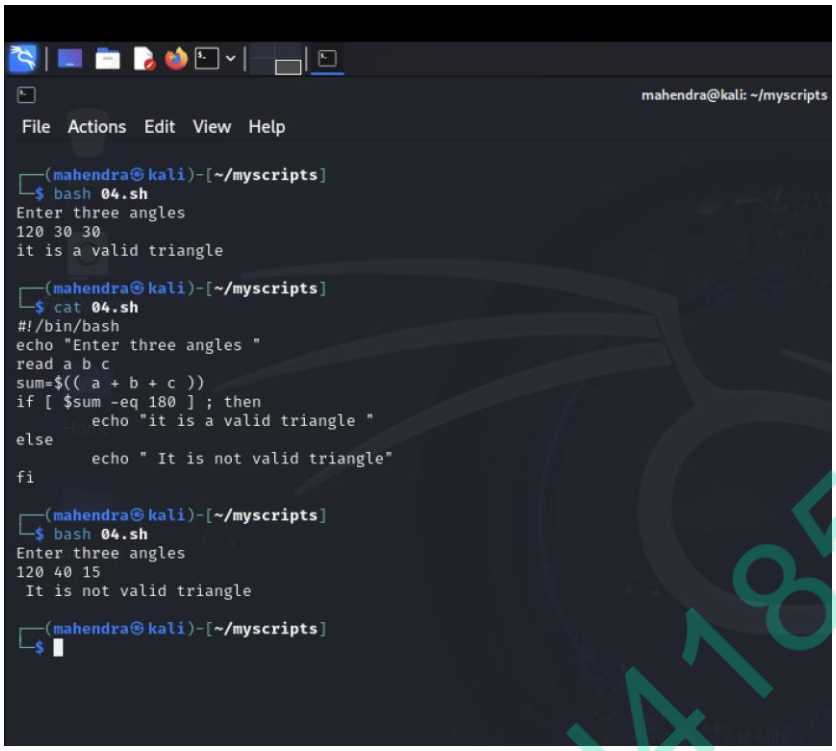
Create shell scripts for the following questions

1. **To find Largest of Three Numbers**

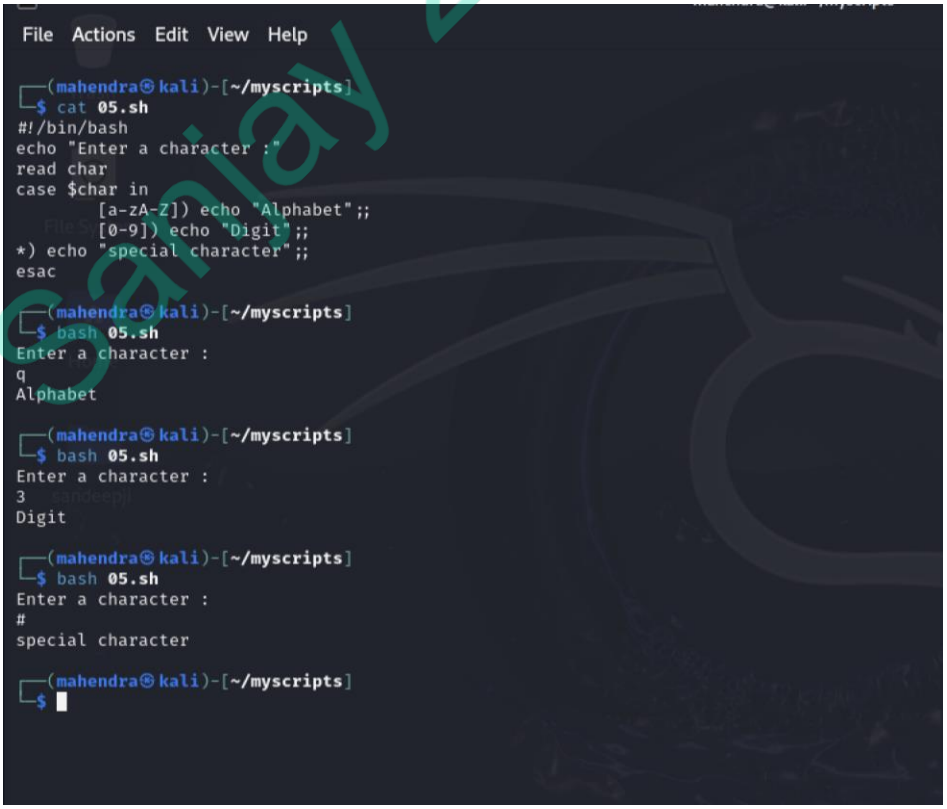


2. To find a year is leap year or not

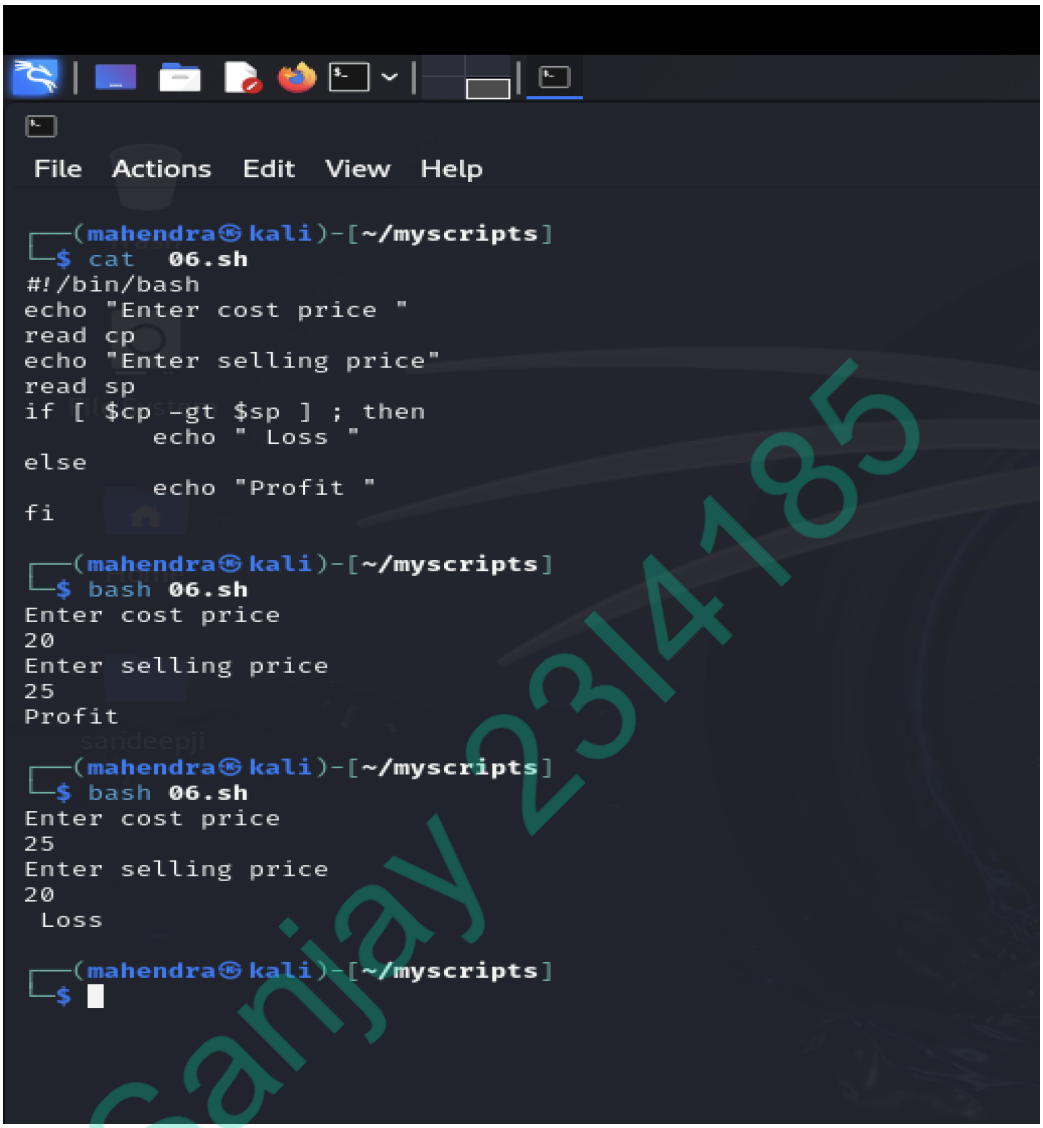
3. To input angles of a triangle and find out whether it is valid triangle or not



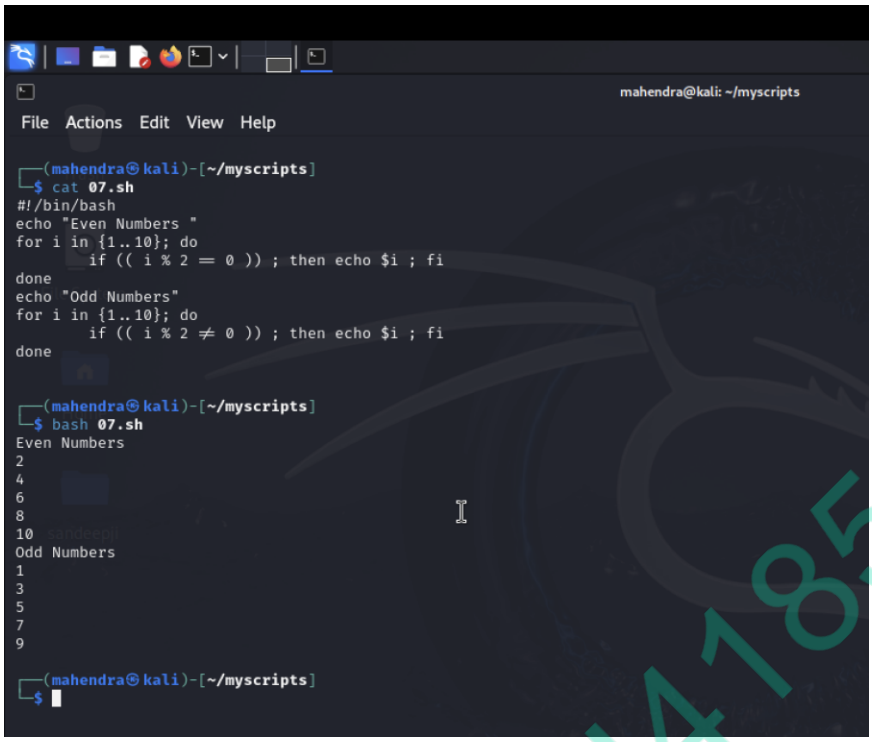
4. To check whether a character is alphabet, digit or special character.



5. To calculate profit or loss

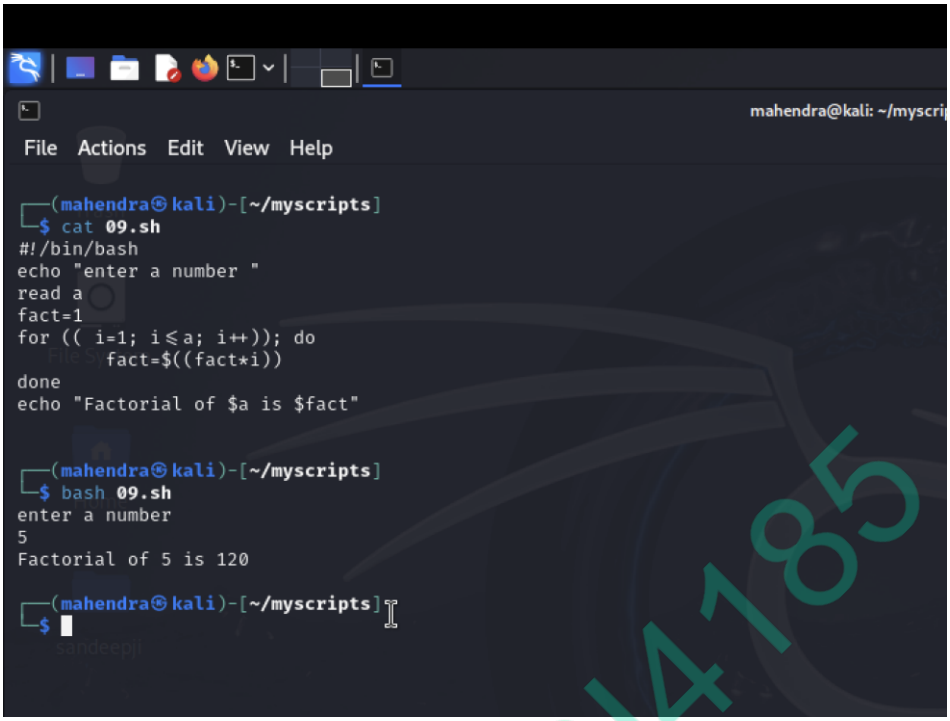


6. To print all even and odd number from 1 to 10

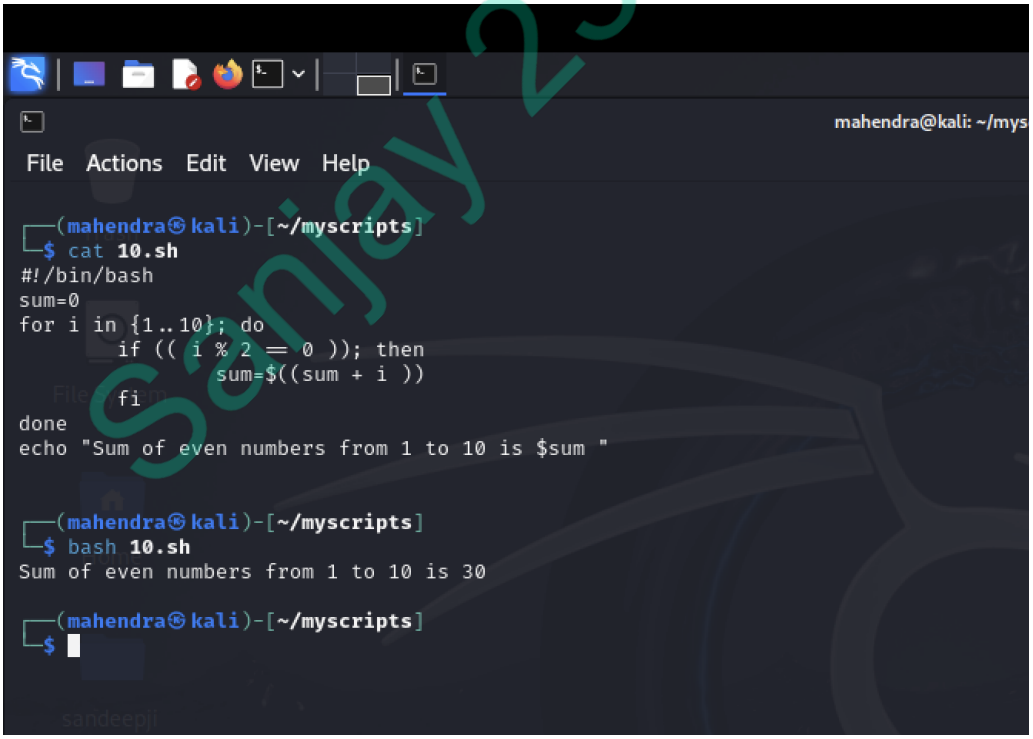


7. To print table of a given number

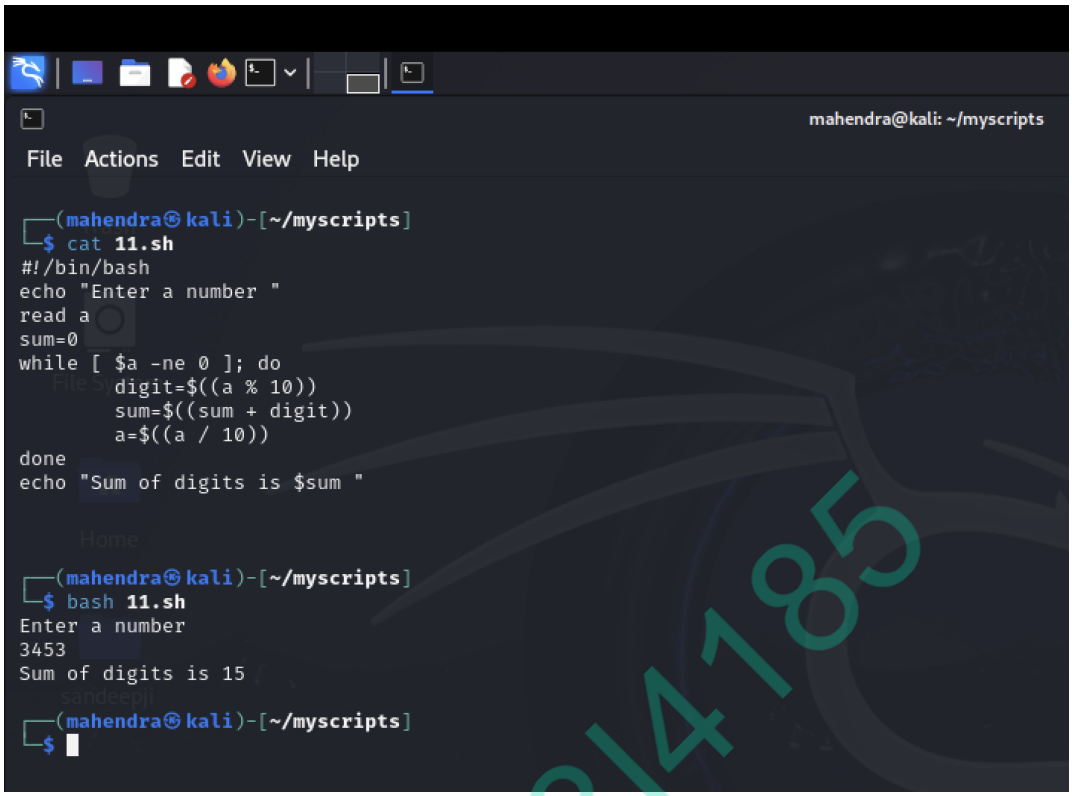
8. To find factorial of a given integer



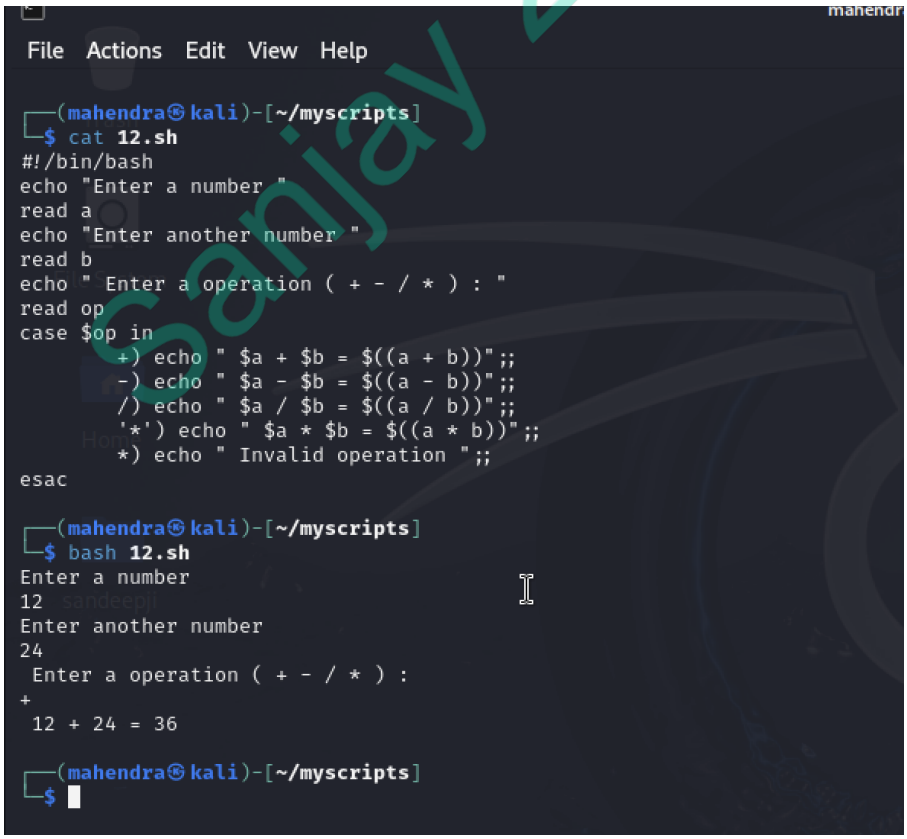
9. To print sum of all even numbers from 1 to 10.



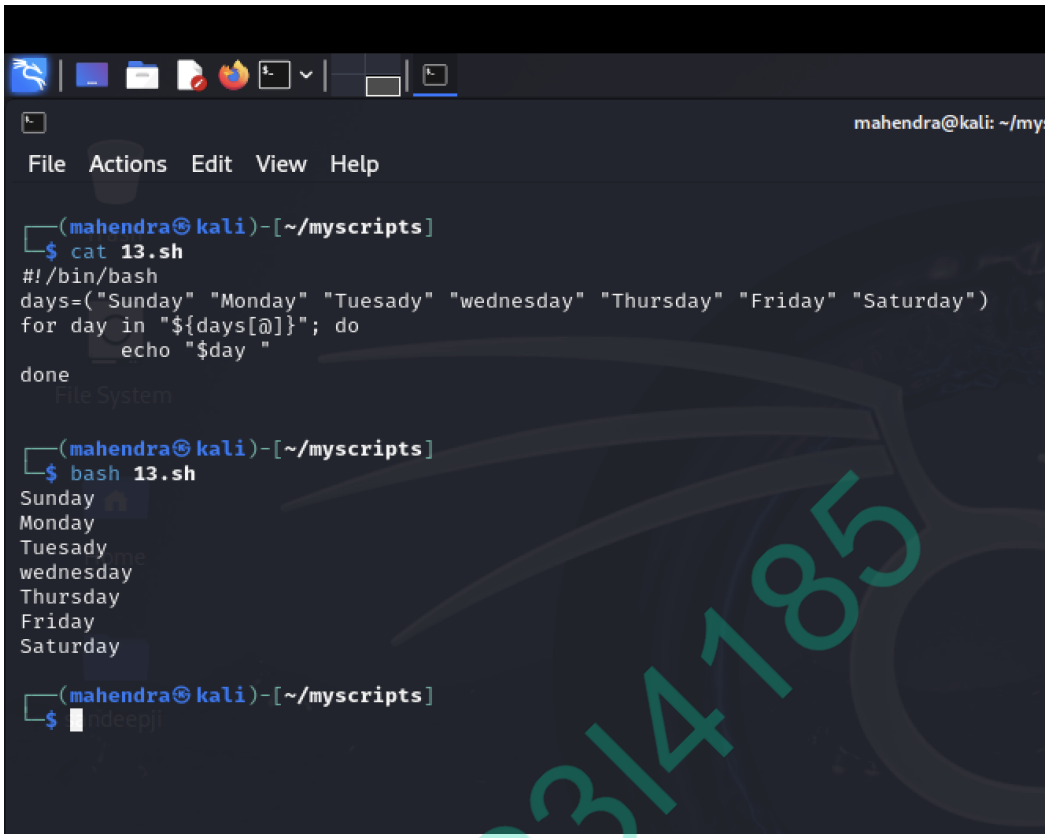
10. To print sum of digit of any number.



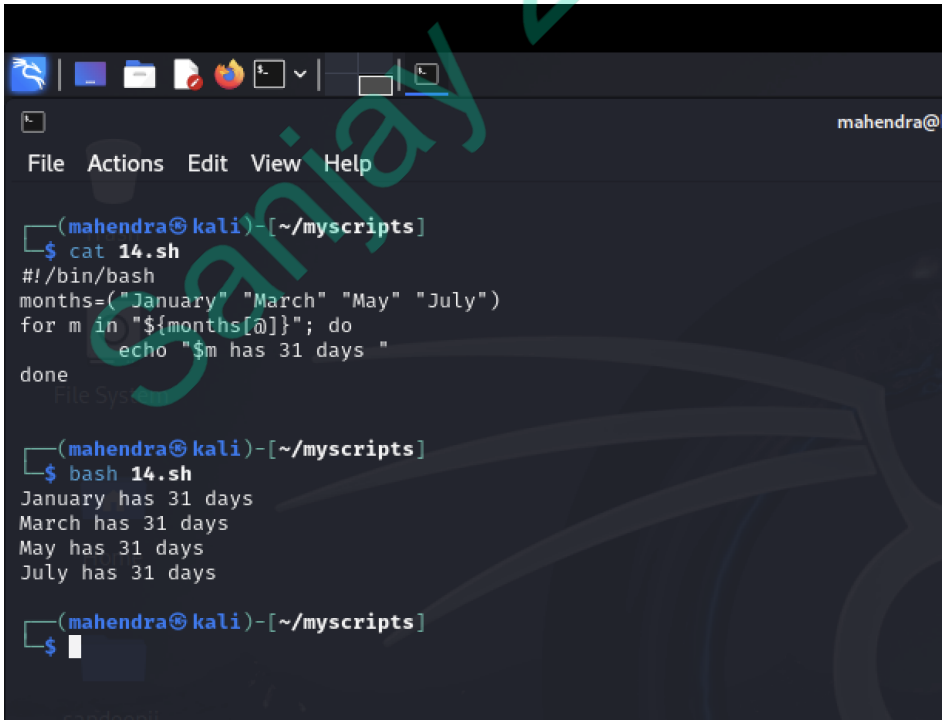
11. To make a basic calculator which performs addition, subtraction, Multiplication, division



12. To print days of a week.



13. To print starting 4 months having 31 days.



14. Using functions,
    a. To find given number is Amstrong number or not
    b. To find whether a number is palindrome or not

c. To print Fibonacci series upto n terms

d. To find given number is prime or composite

e. To convert a given decimal number to binary equivalent

```
                b=$fn
        done
        echo
}
is_prime() {
        num=$1
        if [ $num - le 1 ]; then
                echo " $num is neither prime nor composite "
                return
        fi
        for (( i=2; i*i<=$num; i++)); do
                if [ $((num % i)) -eq 0 ]; then
                        echo "Given number is composite number "
                        return
                fi
        done
        echo "Given number is prime number "
}
decimal_to_binary() {
        num=$1
        binary=""
        while [ $num -gt 0 ]; do
                rem=$((num % 2))
                binary="$rem$binary"
                num=$((num / 2))
        done
        echo "Binary equivalent :  ${binary:-0} "
}
echo "Enter  a number "
read num1
echo "Enter another number for fobonacci"
read n

echo
is_armstrong $num1
is_palindrome $num1
is_prime $num1
decimal_to_binary $num1
fibonacci $n


┌──(mahendra㉿kali)-[~/myscripts]
└─$ bash 15.sh
```

```
┌──(mahendra㉿kali)-[~/myscripts]
└─$ bash 15.sh
Enter  a number
121
Enter another number for fobonacci
5

121 is not an armstrong number
Given number is palindrome
15.sh: line 47: [: syntax error: `-' unexpected
Given number is composite number
Binary equivalent :  1111001
15.sh: line 33: 5=1: command not found
Fibonacci series upto 5 terms:
0
1
1
2
3


┌──(mahendra㉿kali)-[~/myscripts]
└─$
```