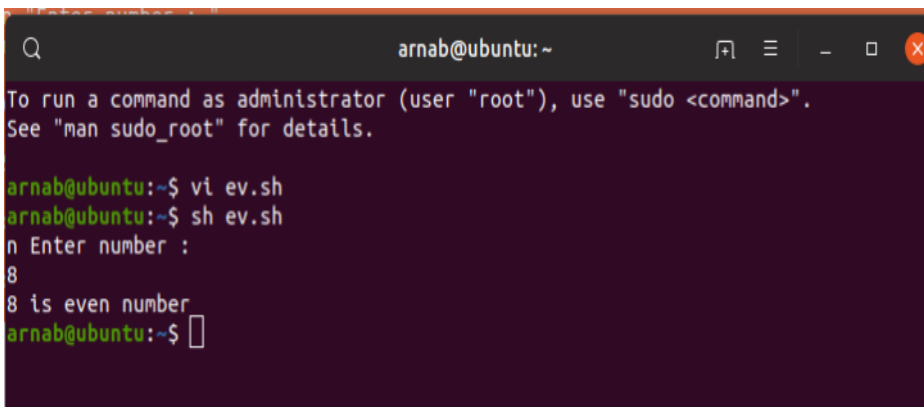


Write a shell program find a number is Even or Odd

```
echo n "Enter number : "  
read n  
  
rem=$(( $n % 2 ))  
  
if [ $rem -eq 0 ]  
then  
    echo "$n is even number"  
else  
    echo "$n is odd number"  
fi
```

Output



```
arnab@ubuntu:~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
arnab@ubuntu:~$ vi ev.sh  
arnab@ubuntu:~$ sh ev.sh  
n Enter number :  
8  
8 is even number  
arnab@ubuntu:~$
```

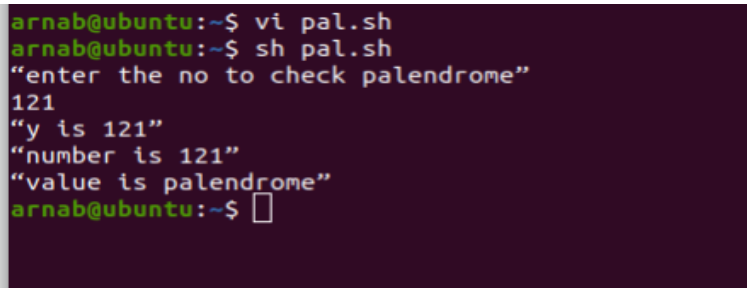
Teacher's signature

.....

Write a shell program to find a number is Palindrome or not

```
echo "enter the no to check palendrome"  
read n  
x=0  
y=0  
m=$n  
while [ $n -ne 0 ]  
do  
x=$(( n % 10 ))  
y=$(( y * 10 + x ))  
n=$(( n / 10 ))  
done  
echo "y is $y"  
echo "number is $m"  
if [ $m -eq $y ]  
then  
echo "value is palendrome"  
else  
echo "value is not palendrome"  
fi
```

Output



```
arnab@ubuntu:~$ vi pal.sh  
arnab@ubuntu:~$ sh pal.sh  
"enter the no to check palendrome"  
121  
"y is 121"  
"number is 121"  
"value is palendrome"  
arnab@ubuntu:~$ █
```

Teacher's signature

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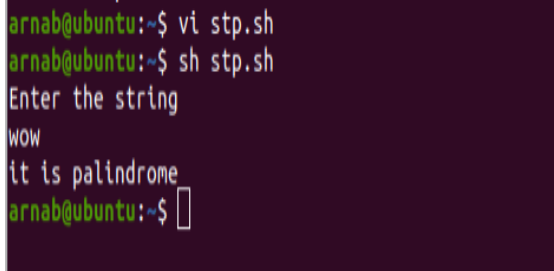
Assignment no:-7

Date: 12/4/19

Write a shell program to find a string is palindrome or not

```
echo Enter the string
read s
echo $s > temp
rvs="$(rev temp)"
if [ $s = $rvs ]
then
echo "it is palindrome"
else
echo " it is not"
fi
```

Output



```
arnab@ubuntu:~$ vi stp.sh
arnab@ubuntu:~$ sh stp.sh
Enter the string
wow
it is palindrome
arnab@ubuntu:~$
```

Teacher's signature

Write a shell program to find the factorial of a number

factorial

```
n=0
```

```
on=0
```

```
fact=1
```

```
echo n "Enter number to find factorial : "
```

```
read n
```

```
on=$n
```

```
while [ $n -ge 1 ]
```

```
do
```

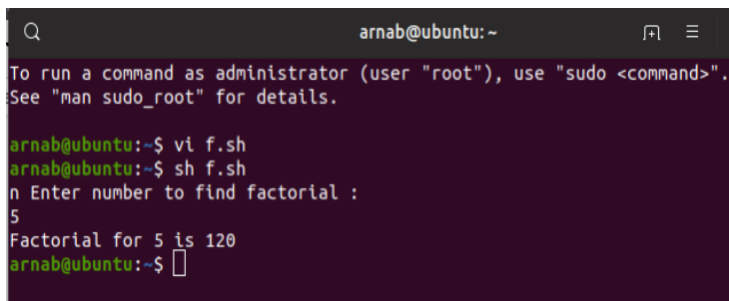
```
  fact=`expr $fact \* $n`
```

```
  n=`expr $n - 1`
```

```
done
```

```
echo "Factorial for $on is $fact"
```

Output



```
arnab@ubuntu:~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
arnab@ubuntu:~$ vi f.sh  
arnab@ubuntu:~$ sh f.sh  
n Enter number to find factorial :  
5  
Factorial for 5 is 120  
arnab@ubuntu:~$
```

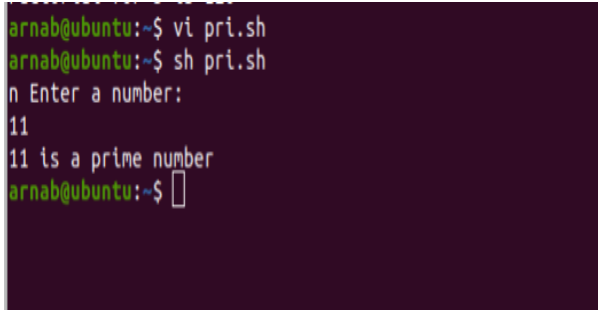
Teacher's signature

.....

Write a shell program to find a number is Prime or not

```
echo n "Enter a number: "  
read num  
i=2  
while [ $i -lt $num ]  
do  
  if [ `expr $num % $i` -eq 0 ]  
  then  
    echo "$num is not a prime number"  
    echo "Since it is divisible by $i"  
    exit  
  fi  
  i=`expr $i + 1`  
done  
echo "$num is a prime number "
```

Output



```
arnab@ubuntu:~$ vi pri.sh  
arnab@ubuntu:~$ sh pri.sh  
n Enter a number:  
11  
11 is a prime number  
arnab@ubuntu:~$
```

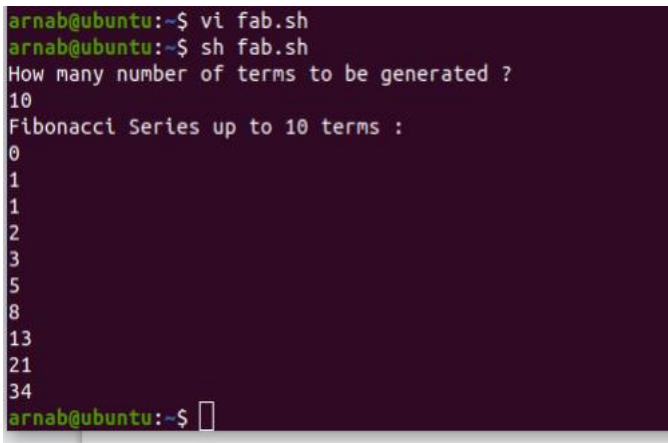
Teacher's signature

.....

Write a shell program to find Fibonacci series

```
echo "How many number of terms to be generated ?"  
read n  
x=0  
y=1  
i=2  
echo "Fibonacci Series up to $n terms :"  
echo "$x"  
echo "$y"  
while [ $i -lt $n ]  
do  
i=`expr $i + 1`  
z=`expr $x + $y`  
echo "$z"  
x=$y  
y=$z  
done
```

Output



```
arnab@ubuntu:~$ vi fab.sh  
arnab@ubuntu:~$ sh fab.sh  
How many number of terms to be generated ?  
10  
Fibonacci Series up to 10 terms :  
0  
1  
1  
2  
3  
5  
8  
13  
21  
34  
arnab@ubuntu:~$ █
```

Teacher's signature

.....

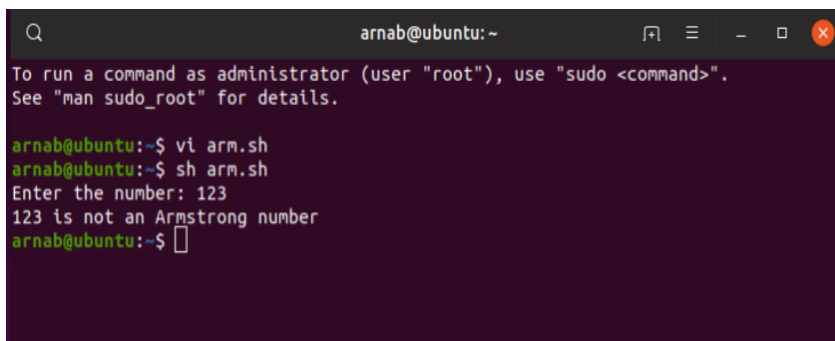
Assignment no:-6

Date:12/4/19

Write a shell program to find a number is Armstrong or not

```
echo -n "Enter the number: "  
read Number  
Length=${#Number}  
Sum=0  
OldNumber=$Number  
  
while [ $Number -ne 0 ]  
do  
    Rem=$((Number%10))  
    Number=$((Number/10))  
    Power=$(echo "$Rem ^ $Length" | bc )  
    Sum=$((Sum+$Power))  
done  
  
if [ $Sum -eq $OldNumber ]  
then  
    echo "$OldNumber is an Armstrong number"  
else  
    echo "$OldNumber is not an Armstrong number"  
fi
```

Output

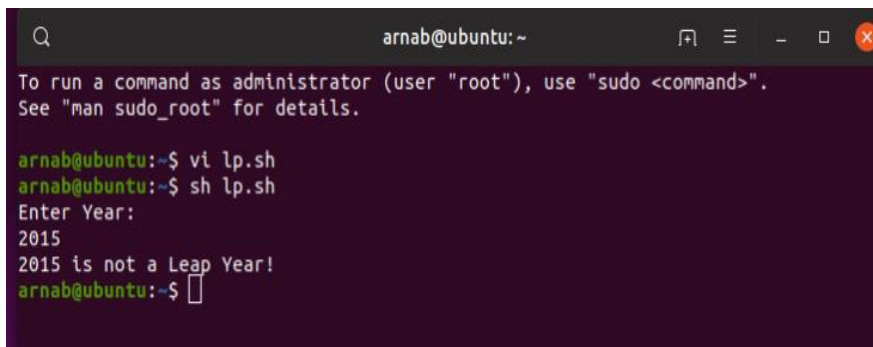


```
arnab@ubuntu:~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
arnab@ubuntu:~$ vi arm.sh  
arnab@ubuntu:~$ sh arm.sh  
Enter the number: 123  
123 is not an Armstrong number  
arnab@ubuntu:~$
```

Write a shell program to find a year is leap or not

```
echo "Enter Year:"
read y
year=$y
y=$(( $y % 4 ))
if [ $y -eq 0 ]
then
    echo "$year is Leap Year!"
else
    echo "$year is not a Leap Year!"
fi
```

Output



```
arnab@ubuntu:~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

arnab@ubuntu:~$ vi lp.sh
arnab@ubuntu:~$ sh lp.sh
Enter Year:
2015
2015 is not a Leap Year!
arnab@ubuntu:~$
```

Teacher's signature

.....

Write a shell program for Temperature conversion

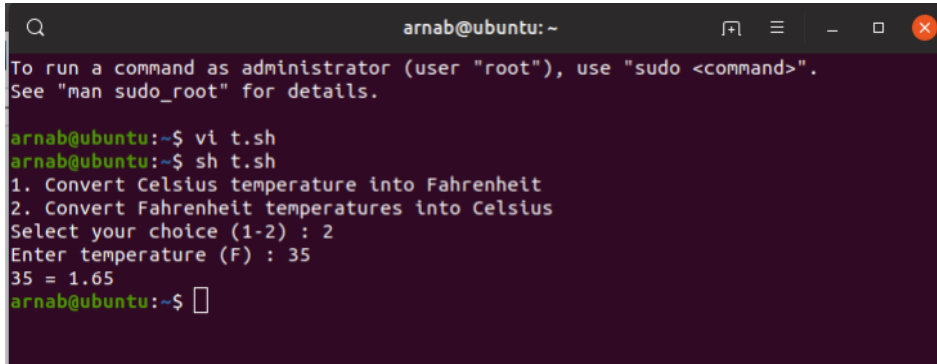
```
echo "1. Convert Celsius temperature into Fahrenheit"
echo "2. Convert Fahrenheit temperatures into Celsius"
echo -n "Select your choice (1-2) : "
read choice
if [ $choice -eq 1 ]
then
echo -n "Enter temperature (C) : "
read tc
# formula  $T_f = (9/5) * T_c + 32$ 
tf=$(echo "scale=2;((9/5) * $tc) + 32" |bc)
echo "$tc C = $tf F"
elif [ $choice -eq 2 ]
then
echo -n "Enter temperature (F) : "
read tf
# formula  $T_c = (5/9) * (T_f - 32)$ 
tc=$(echo "scale=2;(5/9)*($tf-32)"|bc)
echo "$tf = $tc"
else
```

echo "Please select 1 or 2 only"

exit 1

fi

Output

A terminal window titled 'arnab@ubuntu: ~' with standard window controls. The terminal output shows a script being executed. It starts with a message about running as administrator. The user runs 'vi t.sh' and 'sh t.sh'. The script displays two menu options: '1. Convert Celsius temperature into Fahrenheit' and '2. Convert Fahrenheit temperatures into Celsius'. The user selects option 2, enters '2', and then enters '35' for the temperature. The output shows '35 = 1.65'. The prompt returns to the user.

```
arnab@ubuntu: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

arnab@ubuntu:~$ vi t.sh
arnab@ubuntu:~$ sh t.sh
1. Convert Celsius temperature into Fahrenheit
2. Convert Fahrenheit temperatures into Celsius
Select your choice (1-2) : 2
Enter temperature (F) : 35
35 = 1.65
arnab@ubuntu:~$
```

Teacher's signature

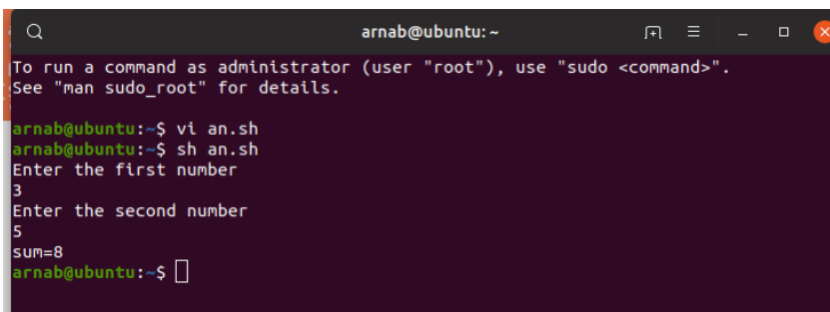
Assignment no:-1

Date: 8/3/19

Write a shell program to add two numbers

```
echo "Enter the first number"  
read a  
echo "Enter the second number"  
read b  
c=$((a+b))  
echo "sum=$c"
```

Output



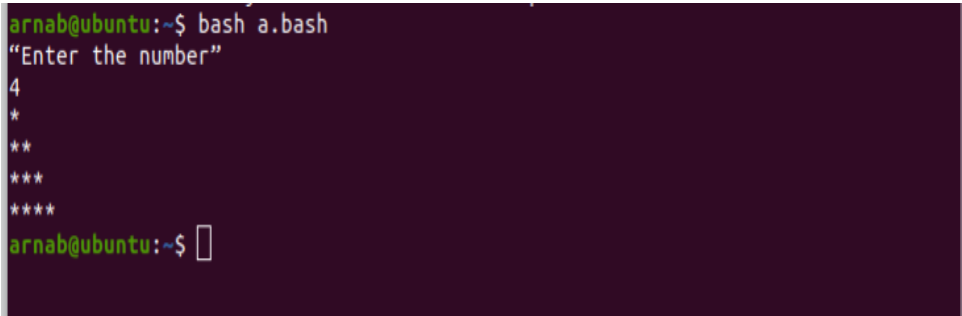
```
arnab@ubuntu: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
arnab@ubuntu:~$ vi an.sh  
arnab@ubuntu:~$ sh an.sh  
Enter the first number  
3  
Enter the second number  
5  
sum=8  
arnab@ubuntu:~$
```

Teacher's signature

Write a shell program to print a pyramid

```
#!/bin/bash
Echo "Enter the number"
read count
for((i=1;i<=count;i++))
do
for((j=1;j<=i;j++))
do
echo-n "*"
done
echo
done
exit 0
```

Output



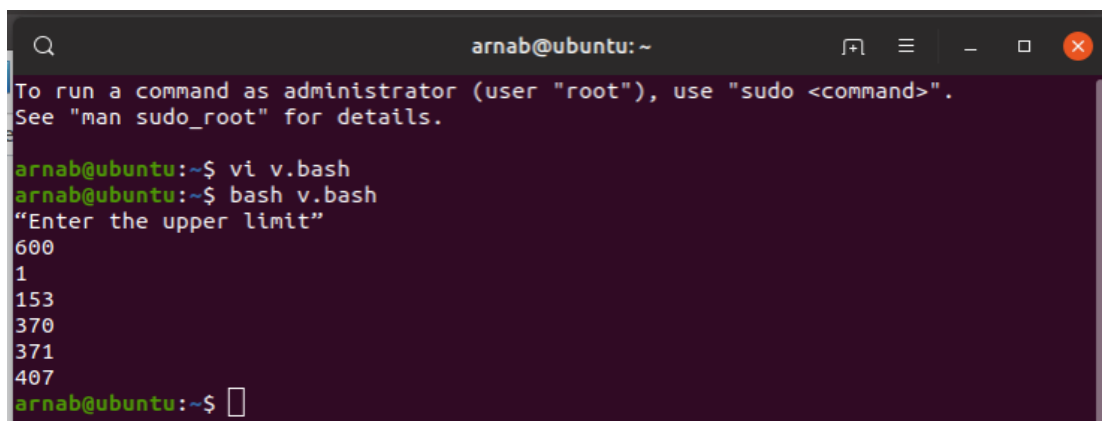
```
arnab@ubuntu:~$ bash a.bash
"Enter the number"
4
*
**
***
****
arnab@ubuntu:~$
```

Teacher's signature

Write a shell program to find Armstrong number between a range

```
#!/bin/bash
i=1
echo "Enter the upper limit"
read n
while((i<=n))
do
c=$i
d=$i
b=0
a=0
while((c>0))
do
a=$((c%10))
b=$((b + a*a*a))
c=$((c/10))
done
if((b==d)); then
echo "$i"
fi
i=$((i+1))
done
```

output



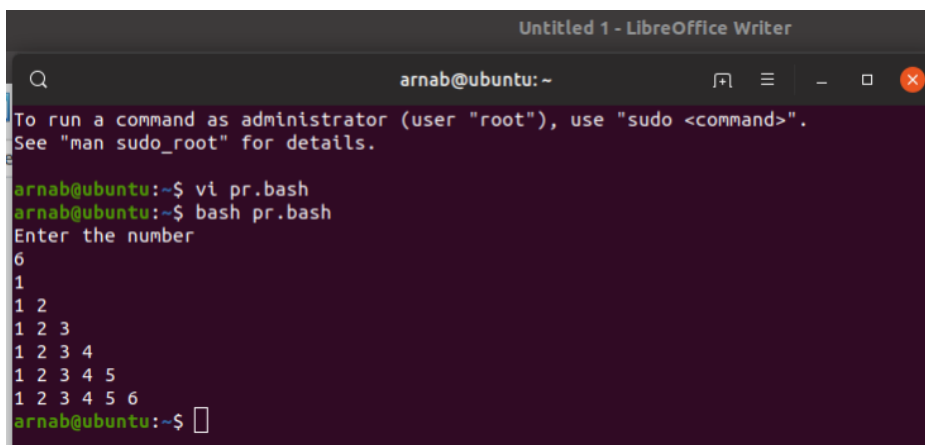
```
arnab@ubuntu: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

arnab@ubuntu:~$ vi v.bash
arnab@ubuntu:~$ bash v.bash
"Enter the upper limit"
600
1
153
370
371
407
arnab@ubuntu:~$
```

Write a shell program to print a numeric pyramid

```
#!/bin/bash
number=1
echo "Enter the number"
read rows
for((i=1; i<=rows; i++))
do
for((j=1; j<=i; j++))
do
echo -n "$number "
number=$((number + 1))
done
number=1
echo
done
```

Output



```
Untitled 1 - LibreOffice Writer
arnab@ubuntu: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
arnab@ubuntu:~$ vi pr.bash
arnab@ubuntu:~$ bash pr.bash
Enter the number
6
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
arnab@ubuntu:~$
```

Teacher's signature

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