UNIX JOURNAL PART 1

1] Write a script to display the according to the time like good morning, good afternoon, good evening and good night.

```
#system time
h=$(date +"%H")
if [ $h -gt 6 -a $h -le 12 ]
then
        echo "good morning"
elif [ $h -gt 12 -a $h -le 16 ]
then
        echo "good afternoon"
elif [ $h -gt 16 -a $h -le 20 ]
then
        echo "good evening"
elif [ $h -gt 20 -a $h -le 24 ]
then
        echo "good night"
elif [ $h -gt 1 -a $h -le 6 ]
then
        echo "good night"
else
        echo "Invalid Hour"
fi
```

Output :

```
good evening # system time
```

2] Write script, using case statement to perform basic math operations(+,-,*,/,%).

```
echo -e "Enter the No1 : \c"
read no1
echo -e "Enter the No2 : \c"
read no2

echo "** Arithmetic Operation **"
echo "Press 1 For Addition"
echo "Press 2 For Substraction"
echo "Press 3 For Multiplication"
echo "Press 4 For Division"
echo "Press 5 For Module"
echo "**************************"
```

```
echo -e "Enter the Choice : \c"
read ch

case $ch in
        1)
                add=$(( $no1 + $no2 ))
                echo "Addition Is : $add"
        ;;
        2)
                sub=$(( $no1 - $no2 ))
                echo "Substraction Is : $sub"
        ;;
        3)
                mul=`expr $no1 \* $no2`
                echo "Multiplication Is : $mul"
        ;;
        4)
                div=`expr $no1 / $no2`
                echo "Division Is : $div"
        ;;
        5)
                mod=$(( $no1 % $no2 ))
                echo "Module Is : $mod"
        ;;
        *)
                echo "Wrong Choice"
        ;;
esac
```

Output :

```
Enter the No1 : 10
Enter the No2 : 55
** Arithmetic Operation **
Press 1 For Addition
Press 2 For Substraction
Press 3 For Multiplication
Press 4 For Division
Press 5 For Module
**************************
Enter the Choice : 1
Addition Is : 65
```

3] Write a script which calculate the percentage and give proper class to the student with pass or fail result.

```
echo -e "Enter the Name : \c"
read name
echo -e "Enter the Sub1 Marks : \c"
read s1
echo -e "Enter the Sub2 Marks : \c"
read s2
echo -e "Enter the Sub3 Marks : \c"
read s3

echo "Name : $name"
echo "Sub1 : $s1"
echo "Sub2 : $s2"
echo "Sub3 : $s3"

if test $s1 -lt 0 -o $s2 -lt 0 -o $s3 -lt 0 -o $s1 -gt
100 -o $s2 -gt 100 -o $s3 -gt 100
then
        echo "Enter the Valid Marks"

else
        total=$(($s1+$s2+$s3))
        echo "Total Marks : $total"

        per=$(($total/3))
        echo "Percentage : $per"

        if test $s1 -lt 35 -o $s2 -lt 35 -o $s3 -lt 35
        then
                echo "Fail"
        else
                if test $per -ge 90 -a $per -lt 100
                then
                        echo "Distinction"
                elif test $per -ge 80 -a $per -lt 90
                then
                        echo "First Class With
Distinction"
                elif test $per -ge 70 -a $per -lt 80
                then
                        echo "First Class"
                elif test $per -ge 60 -a $per -lt 70
```

```
                then
                        echo "Second Class"
                elif test $per -ge 50 -a $per -lt 60
                then
                        echo "Third Class"
                elif test $per -ge 35 -a $per -lt 50
                then
                        echo "Pass"
                else
                        echo "Fail"
                fi
        fi
fi
```

Output :

```
Enter the Name : Darshan Kikani
Enter the Sub1 Marks : 95
Enter the Sub2 Marks : 80
Enter the Sub3 Marks : 78
Name : Darshan Kikani
Sub1 : 95
Sub2 : 80
Sub3 : 78
Total Marks : 253
Percentage : 84
First Class With Distinction
```

4] Write a script which enters username s& password & check that if the username = sugc & password=98765 then display the valid user message. Otherwise invalid user. [script gives maximum 3 attempts to the user.]

```
i=1
while [ $i -le 3 ]
do
        echo -e "Enter the Username : \c"
        read username
        echo -e "Enter the Password : \c"
        read password

        if test $username == "sugc" -a $password ==
"98765"
        then
                echo "Username is : $username"
```

```
                echo "Password is : $password"
                exit
        else
                echo "Invalid Username or Password"
        fi
        i=`expr $i + 1`
done
```

Output :

```
Enter the Username : sugc
Enter the Password : 98765
Username is : sugc
Password is : 98765
```

5] Write down shell script to calculate gross salary of an employee.

```
echo -e "Enter the Basic Salary : \c"
read bsalary

# pf = 10%
# dp = 50%
# da = 35%
# ma = 3%
# hra = 8%

if test $bsalary -gt 0
then
        dp=$(($bsalary*50)/100))
        echo "DP : $dp"

        da=$((($bsalary*35)/100) + $dp))
        echo "DA : $da"

        ma=$((($bsalary*3)/100) + $dp))
        echo "MA : $ma"

        hra=$((($bsalary*8)/100) + $dp))
        echo "HRA : $hra"

        pf=$((($bsalary*10)/100) + $dp))
        echo "PF : $pf"

        gsalary=$(($bsalary + $dp + $da + $hra + $ma -
$pf))
```

```
        echo "Gross Salary : $gsalary"
else
        echo "Enter Valid Salary"
fi
```

Output :

```
Enter the Basic Salary : 15000
DP : 7500
DA : 12750
MA : 7950
HRA : 8700
PF : 9000
Gross Salary : 42900
```

6] Write a script to check whether the number or word is palindrome or not.

```
echo -e "Enter the String : \c"
read input
reverse=""

len=${#input}
#for loop is awk command
for (( i=$len-1; i>=0; i-- ))
do
        reverse="$reverse${input:$i:1}"
done
if [ $input == $reverse ]
then
    echo "$input is palindrome"
else
    echo "$input is not palindrome"
fi
```

Output :

```
Enter the String : ab1221ba
ab1221ba is palindrome
```

7] Write a script to accept a number from user until he enters 0 & find sum of all that numbers.

```
i=1
no1=0
```

```
while [ $i -ne 0 ]
do
        echo -e "Enter the No. : \c"
        read no
        if test $no -ne 0
        then
                no1=$(($no1+$no))
                echo "Sum : $no1"
        else
                exit
        fi
        i=`expr $i + 1`
done
```

Output :

```
Enter the No. : 10
Sum : 10
Enter the No. : 20
Sum : 30
Enter the No. : 30
Sum : 60
Enter the No. : -25
Sum : 35
Enter the No. : 20
Sum : 55
Enter the No. : -15
Sum : 40
Enter the No. : 40
Sum : 80
Enter the No. : 50
Sum : 130
Enter the No. : 0
```

8] Write a script to enter the number & check whether the number is prime number or not.

```
echo -e "Enter the No : \c"
read no
i=2
c=0
while test $i -le `expr $no / 2`
do
        if test `expr $no % $i` -eq 0
```

```
        then
                c=1
        fi

        i=`expr $i + 1`
done
if test $c -eq 0
then
        echo "$no is Prime Number"
else
        echo "$no is Not Prime Number"
fi
```

Output :

```
Enter the No : 11
11 is Prime Number
```

9] Write script to find out biggest number from given three nos. , nos. are supplies as command line argument. Print error if sufficient arguments are not supplied.

```
#command line arguments
no=$#
if test $no -eq 0
then
        echo "No Command Line Arguments"
else

         #command line index
        n1=$1
         #command line index
        n2=$2
         #command line index
        n3=$3

        if test $n1 -eq $n2 -a $n2 -eq $n3
        then
                echo "All the three numbers are equal"
        elif test $n1 -eq $n2 -a $n1 -gt $n3 -a $n2 -gt
$n3
        then
                echo "$n1 and $n2 are equal and max"
```

```
        elif test $n1 -eq $n3 -a $n1 -gt $n2 -a $n3 -gt
$n2
        then
                echo "$n1 and $n3 are equal and max"
        elif test $n2 -eq $n3 -a $n2 -gt $n1 -a $n3 -gt
$n1
        then
                echo "$n2 and $n3 are equal and max"
        elif test $n1 -gt $n2 -a $n1 -gt $n3
        then
                echo "$n1 is max number"
        elif test $n2 -gt $n1 -a $n2 -gt $n3
        then
                echo "$n2 is max number"
        else
                echo "$n3 is max number"
        fi
fi
```

Output :

```
$ sh cmdargs.sh 10 50 25
50 is max number
```

10] Accept a string from terminal and echo suitable message if it does not have at least 10 characters.

```
echo -e "Enter String : \c"
read str

#count the character
len=`echo -n $str | wc -c`

if test $len -lt 10
then

        echo "plese Enter Minimum 10 charater....!"
else

        echo "Your String is Perfact"
fi
```

Output :

```
Enter String : darshan0041
Your String is Perfact
```

11] Write a shell script that calculate the factorial of a number.

```
echo -e "Enter a Number : \c"
read no

no1=$no
f=1

while [ $no -gt 1 ]
do
  f=$((f * no))
  no=$((no - 1))
done

echo "$f Is Factorial Of $no1"
```

Output :

```
Enter a Number : 5
120 Is Factorial Of 5
```

12] Write a shell script that read a pattern and search the pattern.

```
echo -e "Enter Pattern :\c"
read p
echo -e "Enter File Name :\c"
read f

echo "Your Search Pattern Is :$p"
#match the pattern in list file
ls=$(grep -i $p $f)

if test $p != $ls
then
        echo "Pattern Is Not Match In List"
else
        echo "Pattern Match In List : $p"
fi
```

```
File : $cat list
one
two
three
four
five
six
seven
eight
nine
ten

Output :
Enter Pattern :two
Enter File Name :list
Your Search Pattern Is :two
Pattern Match In List : two
```

13] Write a shell script that takes command line argument number as meter and by default converts that no in centimeter.

```
#command line argument
echo "Enter Meters is : $@"
m=$@
cm=$(($m * 100))
echo "Centimeters is : $cm cm"

Output :

$ sh meter_centemeter.sh 100
Enter Meters is : 100
Centimeters is : 10000 cm
```

14] Write a script to delete all vowels from particular string .

```
echo -e "Enter String :\c"
read str

echo "Old String is : $str"
#remove vovels
newstr=$(echo $str | sed 's/[aeiouAEIOU]//g')
```

```
echo "New String is : $newstr"
```

Output :

```
Enter String :shree uttar gujarat bca college
Old String is : shree uttar gujarat bca college
New String is : shr ttr gjrt bc cllg
```

15] Write a shell script to display the numbers from given range in the interval of 1 second one by one.

```
echo -e "Enter the No : \c"
read no

i=1
while [ $i -le $no ]
do
    echo "$i"
    #Interval of 1 second
    sleep 1
    i=`expr $i + 1`
done
```

Output :

```
Enter the No : 10
1
2
3
4
5
6
7
8
9
10
```