16th May Assignment

Q1) Zip the log files and move into another folder every 3 days

```bash
#!/bin/bash
LOG_DIR="/var/log"
ZIP_NAME=`date | sed 's/ /_/gi' | sed s/:/-/gi`
TARGET_DIR="/home/ubuntu/assignment/archive/logs"

# if the TARGET_DIR does not exist
if ! [ -e $TARGET_DIR ]; then
        mkdir -p $TARGET_DIR
        echo "$TARGET_DIR is created" >> $TARGET_DIR/Backup_status
fi

# compressing using tar command
tar -cvzf $TARGET_DIR/$ZIP_NAME.tar.gz $LOG_DIR > /dev/null

# compressing using zip command
#zip -r $TARGET_DIR/$ZIP_NAME.zip $LOG_DIR > /dev/null

echo "Backup is created in $TARGET_DIR/$ZIP_NAME.tar.gz" >> $TARGET_DIR/Backup_status

echo "---------------------------------------------------------------------------------------" >> $TARGET_DIR/Backup_status
echo >> $TARGET_DIR/Backup_status
```

Q2) Script tpo find the factorial of n inputs

```bash
#!/bin/bash
# for every command line argument
for i in $*
do
        # checking if the number is greater than 0
        if [ $i -ge 0 ];then
                fact=1
                n=$i

                # checking if the number is greater than 1
                while [ $n -gt 1 ]
                do
                        fact=`expr $fact \* $n`
                        n=`expr $n - 1`
                done

                echo "Factorial of $i is $fact"
        else
                echo "Factorial is not possible for negitive numbers"
        fi
done
```

Q3) Script to change the file extention

```bash
#!/bin/bash
# finding all the files with the extention
find -type f -name "*$1" > file_names
while read line
do
        # creating a new name with targrt extention
        new_name=`echo $line | sed s/$1/$2/`
        mv $line $new_name
        echo "$line ------> $new_name"
done < file_names
rm file_names
```

19th May Assignment

Q1) Shell script to reverse a string

```bash
#!/bin/bash
read -p "Enter a string : " string
n=`echo $string | wc -c`
reverse=""
while [ $n -gt 0 ]
do
        reverse=$reverse`echo $string | cut -c$n`
        n=`expr $n - 1`
done
echo $reverse
```

Q2) Shell script to send the first ten lines of a file to another file.

```bash
#!/bin/bash
# S1--> input file
# $2--> output file
head -10 $1 > $2
echo "top 10 lines copied to $2"
```

```bash
#!/bin/bash
# S1--> input file
# $2--> output file
for i in `seq 1 10`
do
        sed -n "$i"p $1 >> $2
done
echo "top 10 lines copied to $2"
```

Q3) Merge(concatenate) two files and write the output to the third file.

```bash
#!/bin/bash
# S1--> first file to be merged
# $2--> second file to be merged
# $3--> file name after getting merged
cat $1 > $3
cat $2 >> $3
echo "Merged file is created : $3"
```

Q4) Find all duplicate strings in a file and replace them with another string

```bash
#!/bin/bash

# S1--> file name
read -p "Enter the string that you want to check for duplicate : " string
```

```
count=`grep -iow "$string" $1 | wc -l`
# -i => case insensitive search
# -o => returns only matched patters
# -w => checks for full word


if [ $count -gt 1 ]; then
        echo "$string is present $count times"
        read -p "Enter the replacement string that you want to replace the duplicates with : "
replacement
        sed s/"\b"$string"\b"/$replacement/gi $1
        # \b to check to borders (regular expression patten)
else
        echo "$string is present only $count times"
fi
```

Q5) Find all the IP addresses from a log file and write it to another file.

```
#!/bin/bash
logfile="access.log"
grep -E -o "[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}" $logfile > ip_addr_file
# -E => expanded regular expression
# -o => returns only matched patters
echo "IP addresses are extracted and saved in $ip_addr_file file"
```