Q1) Write a shell script to accept two strings (username and password from the user. Check if the username is your name and password is your USN. If yes, accept the name of the file the user wants to view and display its contents. If either is wrong, given him one more chance to enter, if wrong entry is again done, warn him and quit.

```
name="Ramya"
usn="1BM19CS227"
read -p "Enter your username:" u
read -p "Enter your password:" p
if [ "$u" = $name -a "$p" = $usn ] ; then
read -p "Enter the file name:" fname
cat $fname
fi
if [ "$u" != $name -o "$p" != $usn ] ; then
echo "You have one more chance left"
read -p "Enter your username:" u
read -p "Enter your password:" p
if [ "$u" = $name -a "$p" = $usn ] ; then
read -p "Enter the file name:" fname
cat $fname
else
echo "You have no more chances left"
exit 0
fi
fi
```

Q2) Write a shell script to accept two numbers from the user and print all the multiplication tables in between the given two numbers (inclusive of the given numbers)

```
read -p "Enter two numbers: " n1 n2
echo "Multiplication table between the two numbers"
for (( i=n1; i<=n2; i++ )) ; do
for ((j=1; j<=10; j++ )) ; do
mul=$(($i*$j))
echo "$i x $j = $mul"
done
done
```

Q3) Take three command line arguments for filenames and display the file with the least word count

```
c1=`wc -w < $1`
c2=`wc -w < $2`
c3=`wc -w < $3`
if [ $c1 -lt $c2 -a $c1 -lt $c3 ] ; then
echo "File $1 has the least word count which is equal to $c1"
cat $1
elif [ $c2 -lt $c1 -a $c2 -lt $c3 ] ; then
echo "File $2 has the least word count which is equal to $c2"
cat $2
```

```
else
echo "File $3 has the least word count which is equal to $c3"
cat $3
fi
```

Q4) Take 5-digit number from user, Find sum of max and min digits, Find product of min and max digits and Find remainder of min and max digits.

```
read -p "Enter 5-digit numbers:" n
l=0
s=9
while [ $n -ne 0 ] ; do
r=$((n%10))
if [ $l -lt $r ] ; then
l=$r
fi
if [ $s -gt $r ] ; then
s=$r
fi
n=$((n/10))
done
sum=$(($l+$s))
pro=$(($l*$r))
rem=$(($l%$s))
echo "The sum is $sum; the product is $pro; the remainder is $rem"
```

Q5) Check if a number is a palindrome, if it is, take input till the user enters a non-palindrome and print the first mismatch position.

```
count=1
while true
do
read -p "Enter the number:" num
extranum=$num
rev=0
while [ $num -ne 0 ] ; do
temp=$(($num%10))
rev=$((rev*10+temp))
num=$((num/10))
done
if [ "$extranum" = "$rev" ] ; then
echo "Palindrome"
else
echo "Not Palindrome"
while [ $extranum -ne 0 -a $rev -ne 0 ]
do
a=$((rev%10))
b=$((extranum%10))
if [ $a -eq $b ] ; then
count=$((count+1))
```

```
else
echo "Mismatched position is $count"
exit 1
fi
rev=$((rev/10))
extranum=$((extranum/10))
done
fi
done
```

Q6) Question- shell script to accept 3 digit number and convert the number into words.Find the range 0..99,100..199,200,299 etc.And it should accept the number until the user wants to exit.

```
while true ; do
read -p "Do you want to continue? [y/n]" ans
case $ans in
y) read -p "Enter a 3-digit number: " n
num="$n"
rev=0
while [ $n -ne 0 ] ; do
temp=$(($n%10))
rev=$((rev*10+$temp))
n=$(($n/10))
done
while [ $rev -ne 0 ] ; do
ch=$((rev%10))
case $ch in
0) echo -n "zero " ;;
1) echo -n "one " ;;
2) echo -n "two " ;;
3) echo -n "three " ;;
4) echo -n "four " ;;
5) echo -n "five " ;;
6) echo -n "six " ;;
7) echo -n "seven " ;;
8) echo -n "eight " ;;
9) echo -n "nine " ;;
*) echo "Invalid choice"
esac
rev=$((rev/10))
done
if [ $num -ge 0 -a $num -le 99 ]
then
echo " It is in the range 0..99"
elif [ $num -ge 100 -a $num -le 199 ]
then
echo "$num is in the range 100..199"
elif [ $num -ge 200 -a $num -le 299 ]
then
echo "$num is in the range 200..299"
```

```
elif [ $num -ge 300 -a $num -le 399 ]
then
echo "$num is in the range 300..399"
elif [ $num -ge 400 -a $num -le 499 ]
then
echo "$num is in the range 400..499"
elif [ $num -ge 500 -a $num -le 599 ]
then
echo "$num is in the range 500..599"
elif [ $num -ge 600 -a $num -le 699 ]
then
echo "$num is in the range 600..699"
elif [ $num -ge 700 -a $num -le 799 ]
then
echo "$num is in the range 700..799"
elif [ $num -ge 800 -a $num -le 899 ]
then
echo "$num is in the range 800..899"
else
echo "$num is in the range 900..999"
fi
;;
n) exit 1
esac
done
```

Q7) Display the prime numbers between two input numbers (including the inputs)

```
read -p "Enter the two numbers: " N M

for (( i=$N+1; i <= $M-1; i++ ))
do
p=0
for (( j=2; j <= $i-1; j++ ))
do
if [ `expr $i % $j` -eq 0 ]
then
p=1
break
fi
done
if [ `expr $p` = 0 ]
then
echo $i
fi
done
```

Q8) Shell script to accept a number as input and display the frequency of a digit in that number

```
c=0
read -p "Enter a Number: " num
x=$num
read -p "Enter the digit whose frequency has to be found: " digit
while [ $num -ne 0 ] ; do
rem=$(($num%10))
if [ $rem -eq $digit ] ; then
c=$((c+1))
fi
num=$((num/10))
done
echo "$digit occured $c times in $x"
```

Q9) Write a Shell Script to accept three filenames as command line arguments. Display the name of the file with minimum number of characters. Repeat this for different inputs till the user wishes to stop with every time the number of filename inputs decrementing by one (1st iteration -> 3 filenames, 2nd iteration -> 2 filenames and so on).

```
c1=`wc -c < $1`
c2=`wc -c < $2`
c3=`wc -c < $3`
if [ $c1 -lt $c2 -a $c1 -lt $c3 ] ; then
echo "$1 has the least char count which is $c1"
elif [ $c2 -lt $c1 -a $c2 -lt $c3 ] ; then
echo "$2 has the least char count which is $c2"
else
echo "$3 has the least char count which is $c3"
fi

read -p "Do you want to continue? [y/n]" a
case $a in
y) c4=`wc -c < $1`
c5=`wc -c < $2`
if [ $c4 -lt $c5 ] ; then
echo "$1 has the least char count which is $c4"
else
echo "$2 has the least char count which is $c5"
fi ;;
n) exit
esac

read -p "Do you want to continue? [y/n]" a
case $a in
y)
c6=`wc -c < $1`
echo "$1 has the least char count which is $c6";;
n) exit
esac
```