Date 21/8/19

Expt. No. DAY 5 (shell programming) Page No. 10

Q: write a shell script to:- (Qs 1,2,3,4,7)
add two numbers, compare two numbers, check whether odd or even, sum of the digits and reverse of a number.

Ans)
```
#!/bin/bash
echo enter number 1
read n1
echo enter number 2
read n2
sum=`expr $n1 + $n2`
echo Sum of two numbers is $sum

# compare
if [ $n1 -gt $n2 ]
then
        echo $n1 is greater than $n2
else elif [ $n1 -lt $n2]
then
        echo $n1 is less than $n2
else
        echo both one equal
fi

# odd or even
if [ expr $n1 %& 2 -eq 0 ]
then
        echo even number
else
        echo odd number
fi
```

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```
# sum of digits
s=0
for((i=$n1; i>0; i=$i/10))
do
        r=`expr $i % 10`
        s=`expr $s + $r`
done
 echo Sum of digits is $s of number $n1

# reverse of number
r=0
while [ $n2 -gt 0 ]
do
      k=`expr $n2 % 10`
      r=`expr $r \* 10 + $k`
      n2=`expr $n2 / 10`
done
 echo reverse is $r
```

OUTPUT

```
enter number 1
123
enter number 2
456
Sum of two numbers is 579
123 is lesser than 456
Odd number
Sum of digits of number 123 is 6
Reverse of the number is 654
```

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(10) Write a shell script which report names and sizes of all files in a directory whose size exceeds 150 bytes. The filename should be printed in decreasing order of sizes The total number of files should also be printed

Ans)
```
#!/bin/bash
ls -l $1|tr -s ' '|cut -d ' ' -f5,9|sort -nr > temp
i=0
echo list of files with size greater than 150 bytes
while read x
do
    size=`echo $x|cut -d ' ' -f1`
    if [ size -ge 150 ]; then
        size1=`echo $x|cut -d ' ' -f2`
        echo $size1
        i=`expr $i + 1`
    fi
done < temp
echo total $i files are there in directory $1
```

OUTPUT

```
$ sh shell10.sh shell
$ list of files with size greater than 150 bytes
  shell_add.sh
  shell5.sh
  shellarr.sh
  shell2.sh
  shell10.sh
total 4 files are there in directory shell.
```

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(11) Write a shell command that accepts a filename as arguement and displays last modification time if file exists and suitable message if does not.

Ans)
```
#!/bin/bash
if [ $# -ne 1 ]
then
        echo "not valid arguement"
else
        ls -l $1|tr -s ' '|cut -d ' ' -f6,7,8
fi
```

OUTPUT

```
$ sh shell11.sh myfile
Aug 7 15:26
```

(12) Write a shell script that accepts two directories namely OS1 and OS2 as arguments and deletes those files in OS2 which are identical to the file names in OS1

Ans)
```
#!/bin/bash
if [ $# -ne 2 ]
then
        echo Invalid arguement
else
        ls $1 > temp
        while read x
        do
                ls $2 | grep $x > temp1
                if [ -s temp1 ]
                then
                        rm $2/x
                fi
        done < temp
fi
```

ls $1 ; ls $2

OUTPUT

```
$ sh shell12.sh os1 os2
f1 f2 f3 f4 f5 f00
f55 f56
```

(12) Write a shell script to list the name of files under the current directory started with vowels

Ans)

```
#!/bin/bash
ls | grep '^[ AEIOUaeiou ]' > temp   # for end
while read x ;do                     # '[ AEIOUaeiou ]$'
        if [ -f $x ]; then
            echo $x
        fi
done < temp
```

OUTPUT

```
add1.sh
o.txt
e.txt
i.txt
```

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H/W 5,6,8) write a shell script to:- maximum of 3 no's
b) division of one by another & check either div by zero
i) prime number or not.

Ans)
```
#!/bin/bash
echo enter number 1; read n1
echo enter number 2; read n2
echo enter number 3; read n3

if [ $n1 -gt $n2 ]; then
        if [ $n1 -gt $n3 ]; then
                echo $n1 is highest
        else
                echo $n3 is highest
        fi
else
        if [ $n2 -gt $n3 ]; then
                echo $n2 is highest
        else
                echo $n3 is highest
        fi
fi
```

OUTPUT

```
enter number 1
3
enter number 2
4
enter number 3
1
4 is highest
```

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b)
```
#!/bin/bash
echo enter number 1 ; read n1
echo enter number 2 ; read n2
if [ $n2 -eq 0 ]
then
        echo division by 0 is not possible
else
        div=`expr $n1 / $n2`
        rem=`expr $n1 % $n2`
    echo Quotient is $div and Remainder is $rem
fi
```

OUTPUT

```
enter number 1
25
enter number 2
4
Quotient is 6 and Remainder is 1
```

c)
```
#!/bin/bash
echo enter the number
read n1
i=2
i2=`expr $i \* $i`
while [ `expr $i \* $i` -le $n1 ]
do
        if [ `expr $n1 % $i` -eq 0 ] ; then
          echo $n1 is not prime
          break
        fi
        let i++
done
```

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```
if [ 'expr $i \* $i' -gt $n1 ]; then
    echo $n1 is prime
fi
```

OUTPUT

```
enter the number
13
13 is prime.
```