Shell Programming Assignment (Lab-3 & Lab 4)

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1. Write a shell script that will create three directories called DIR1, DIR2 and DIR3 and further display all the files directories within the present working directory.

```
mkdir DIR1 DIR2 DIR3
ls
~
~
~
```

```
~
"Q1.sh" [New] 2L, 24B written
[root@localhost ~]# chmod +x Q1.sh
[root@localhost ~]# ./Q1.sh
bench.py  DIR1  DIR2  DIR3  hello.c  Q1.sh
[root@localhost ~]#
```

2. Read three directory names from the user and create those directories using shell scripting. At last display all the files and directories also in the present working directory.

```
[root@localhost ~]# vi Q2.sh
```

```
echo "Provide a name for 1st directory"
read a

echo "Provide a name for 2nd directory"
read b

echo "Provide a name for 3rd directory"
read c

mkdir $a $b $c
ls
~
~
```

```
~
"Q2.sh" [New] 11L, 162B written
[root@localhost ~]# chmod +x Q2.sh
[root@localhost ~]# ./Q2.sh
Provide a name for 1st directory
OS
Provide a name for 2nd directory
COA
Provide a name for 3rd directory
FLAT
bench.py  COA  FLAT  hello.c  OS  Q2.sh
[root@localhost ~]#
```

3. Read the name of the existing directory from the user and remove that directory (The directory may be empty/non-empty)

```
[root@localhost ~]# vi Q3.sh
```

```
"Q3.sh" [New] 5L, 78B written
[root@localhost ~]# chmod +x Q3.sh
[root@localhost ~]# ./Q3.sh
Provide the name of the directory you want to delete
FLAT
[root@localhost ~]# ls
bench.py  COA  hello.c  OS  Q2.sh  Q3.sh
[root@localhost ~]#
```

4. Read two values, say X and Y from the user and display the value of X^Y.

```
[root@localhost ~]# vi Q4.sh
```

```
echo "Enter a number"
read x

echo "Enter another number"
read y

result=$((x**y))

echo "The result is $result"

~
```

```
"Q4.sh" 10L, 114B written
[root@localhost ~]# ./Q4.sh
Enter a number
4
Enter another number
2
The result is 16
[root@localhost ~]#
```

5. Check whether the given number is odd or even

```
[root@localhost ~]# vi oddoreven.sh
```

```
echo "Enter number"
read x
if [ $(( x%2 )) == 0 ]
then
echo "Even"
else
echo "Odd"
fi
~
~
```

```
[root@localhost ~]# chmod +x oddoreven.sh
[root@localhost ~]# ./oddoreven.sh
Enter number
5
Odd
[root@localhost ~]#
```

6. Check whether the given number is negative or positive

```
[root@localhost ~]# vi Q6.sh
```

```
echo "Enter number"
read x
if [ $x -gt 0 ]
then
echo "Positive number"
else
echo "Negative number"
fi
```

```
"Q6.sh" [New] 9L, 105B written
[root@localhost ~]# chmod +x Q6.sh
[root@localhost ~]# ./Q6.sh
Enter number
6
Positive number
[root@localhost ~]# ./Q6.sh
Enter number
-2
Negative number
```

7. Print the first N even numbers. Read the value of N from the user.

```
[root@localhost ~]# vi Q7.sh
```

```
echo "Enter number"
read x
n=2
while [ $n -le $x ]
do
if [ $((n%2)) == 0 ]
then
echo "$n"
fi
n=$((n+1))
done
~
~
```

```
~
"Q7.sh" [New] 11L, 110B written
[root@localhost ~]# chmod +x Q7.sh
[root@localhost ~]# ./Q7.sh
Enter number
9
2
4
6
8
[root@localhost ~]#
```

8. Print the multiplication table of a given number (For example multiplication table of 5)

    1*5=5
    2*5=10
    .....
    .....
    10*5=50

```
[root@localhost ~]# vi Q8.sh
```

```
echo "nter number"
read x
n=1
while [ $n -le 10 ]
do
echo "$x X $n = $((x*n))"
n=$((n+1))
done
~
~
```

```
"Q8.sh" [New] 8L, 95B written
[root@localhost ~]# chmod +x Q8.sh
[root@localhost ~]# ./Q8.sh
nter number
5
5 X 1 = 5
5 X 2 = 10
5 X 3 = 15
5 X 4 = 20
5 X 5 = 25
5 X 6 = 30
5 X 7 = 35
5 X 8 = 40
5 X 9 = 45
5 X 10 = 50
[root@localhost ~]#
```

9. Read 5 names from the user and create the directories with that names.

```
[root@localhost ~]# vi Q9.sh
```

```
n=1
while [ $n -le 5 ]
do
echo "Enter name of Directory"
read x
mkdir $x
n=$((n+1))
done
~
~
```

```
"Q9.sh" [New] 7L, 78B written
[root@localhost ~]# chmod +x Q9.sh
[root@localhost ~]# ./Q9.sh
```

```
^C[root@localhost ~]# ./Q9.sh
Enter name of Directory
a
Enter name of Directory
b
Enter name of Directory
c
Enter name of Directory
d
Enter name of Directory
e
[root@localhost ~]#
```

```
[root@localhost ~]# ls
a  b  bench.py  c  d  e  hello.c  Q6.sh  Q7.sh  Q8.sh  Q9.sh
[root@localhost ~]#
```

10. Create 50 directories, the names should be DIR-1, DIR-2....DIR-50 and then list all files and directories. In the same script, delete all those directories.

```
[root@localhost ~]# vi Q10.sh
```

```
n=1
while [ $n -le 50 ]
do
mkdir DIR-$n
n=$((n+1))
done

ls

n=$((n-1))
while [ $n -gt 0 ]
do
rmdir DIR-$n
n=$((n-1))
done
echo "After deletion"
ls
~
```

```
"Q10.sh" [New] 17L, 150B written
[root@localhost ~]# chmod +x Q10.sh
[root@localhost ~]# ./Q10.sh
bench.py  DIR-14  DIR-2   DIR-25  DIR-30  DIR-36  DIR-41  DIR-47  DIR-7
DIR-1     DIR-15  DIR-20  DIR-26  DIR-31  DIR-37  DIR-42  DIR-48  DIR-8
DIR-10    DIR-16  DIR-21  DIR-27  DIR-32  DIR-38  DIR-43  DIR-49  DIR-9
DIR-11    DIR-17  DIR-22  DIR-28  DIR-33  DIR-39  DIR-44  DIR-5   hello.c
DIR-12    DIR-18  DIR-23  DIR-29  DIR-34  DIR-4   DIR-45  DIR-50  Q10.sh
DIR-13    DIR-19  DIR-24  DIR-3   DIR-35  DIR-40  DIR-46  DIR-6
After deletion
bench.py  hello.c  Q10.sh
[root@localhost ~]#
```