VIT-AP UNIVERSITY

School: SCOPE | Semester: WIN 2020-21

Subject: Operating System Lab | Subject Code: CSE2008

Assignment 3

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1. Write a shell script/program to display list of files, list of users and to remove a file using three basic case statements.

CODE:

```
jas@Jaswanth:~$ ls -l
total 48
drwxr-xr-x 6 jas jas 4096 Mar 17 19:41 VIT-AP
-rwxr-xr-x 1 jas jas  312 Mar 22 16:03 b.sh
-rwxr-xr-x 1 jas jas  335 Mar 22 16:23 c.sh
-rwxr-xr-x 1 jas jas  302 Mar 22 15:55 d.sh
-rwxr-xr-x 1 jas jas   60 Mar 16 18:47 jaswa.sh
-rwxr-xr-x 1 jas jas  307 Mar 16 19:24 m.sh
-rwxr-xr-x 1 jas jas  243 Mar 16 19:13 mj.sh
-rwxr-xr-x 1 jas jas   11 Mar 22 16:01 n.sh
-rwxr-xr-x 1 jas jas  150 Mar 16 20:30 o.sh
-rwxr-xr-x 1 jas jas  134 Mar 16 20:47 q.sh
-rwxr-xr-x 1 jas jas  233 Mar 22 16:08 u.sh
-rwxr-xr-x 1 jas jas  149 Mar 16 20:42 z.sh
jas@Jaswanth:~$ chmod 777 b.sh
jas@Jaswanth:~$ bash main.sh
bash: main.sh: No such file or directory
jas@Jaswanth:~$ bash b.sh
b.sh: line 1: o: command not found

 is a prime number.
b.sh: line 17: syntax error near unexpected token `fi'
b.sh: line 17: `                    fi '
jas@Jaswanth:~$ bash jaswa.sh
Enter your name
Jaswanth
```

2. Write a shell script/program to calculate factorial of a given number using do-while loop

CODE:

```
echo "Enter a number"
read num

fact=1

while [ $num -gt 1 ]
do
          fact=$((fact * num))  #fact = fact * num
            num=$((num - 1))      #num = num - 1
    done

    echo $fact
~
```

OUTPUT:

```
jas@Jaswanth:~$ vi xa.sh
jas@Jaswanth:~$ chmod +x xa.sh
jas@Jaswanth:~$ ./xa.sh
Enter a number
5
120
```

3. Write a shell script/program to calculate sum of all the numbers from 1 to n using for loop.

CODE:

```
echo "Enter Size(N)"
read N

i=1
sum=0

echo "Enter Numbers"
while [ $i -le $N ]
do
          read num           #get number
            sum=$((sum + num)) #sum+=num
              i=$((i + 1))
      done

      echo $sum
~
```

OUTPUT:

```
jas@Jaswanth:~$ vi fg.sh
jas@Jaswanth:~$ chmod +x fg.sh
jas@Jaswanth:~$ ./fg.sh
Enter Size(N)
6
Enter Numbers
6
8
0
5
3
1
23
```

4. Write a shell script/program to call a user defined function with two numbers as parameter. Return the sum of those two numbers and display the result

CODE:

```
function add()
{
            sum=$(($1 + $2))
                echo "Sum = $sum"
        }

a=50
b=40
add $a $b
~
```

OUTPUT:

```
jas@Jaswanth:~$ vi asx.sh
jas@Jaswanth:~$ chmod +x asx.sh
jas@Jaswanth:~$
jas@Jaswanth:~$ ./asx.sh
Sum = 90
```

5. Write a shell script/program to check whether a given number is palindrome or not. [take the number from user input]

CODE:

```
echo -n "Enter number : "
read n

# store single digit
sd=0

# store number in reverse order
rev=""

# store original number
on=$n

while [ $n -gt 0 ]
do
            sd=$(( $n % 10 )) # get Remainder
                n=$(( $n / 10 ))  # get next digit
                    # store previous number and current digit in reverse
                        rev=$( echo ${rev}${sd} )
                done

                if [ $on -eq $rev ];
                then
                          echo "Number is palindrome"
                  else
                            echo "Number is NOT palindrome"
fi
```

OUTPUT:

```
jas@Jaswanth:~$ vi ol.sh
jas@Jaswanth:~$ chmod +x ol.sh
jas@Jaswanth:~$ ./ol.sh
Enter number : 121
Number is palindrome
```

6. . Write a shell script/program to check whether a given number is prime or not. [take the number from user input]

CODE:

```
echo "enter number"
read num
function prime
{
        for((i=2; i<=num/2; i++))
        do
                if [ $((num%i)) -eq 0 ]
                        then
                                echo "$num is not a prime number."
                                exit
                                fi
                done
                echo "$num is a prime number."
        }
r=`prime $number`
echo "$r"
```

OUTPUT:

```
jas@Jaswanth:~$ vi ik.sh
jas@Jaswanth:~$ chmod +x ik.sh
jas@Jaswanth:~$ ./ik.sh
enter number
12
12 is not a prime number.
```