GLS UNIVERSITY
Bachelor of Computer Applications (BCA)

Semester-IV
210301407 LINUX SHELL SCRIPTING (PRACTICAL)

Operators Demo

Arithmetic Operators :

```
a=10
b=2

val=$(($a+$b))
echo "Sum is :$val"
val=$(($a-$b))
echo "Sub is :$val"
val=$(($a*$b))
echo "Mul is :$val"
val=$(($a/$b))
echo "Div is :$val"
val=$(($a%$b))
echo "Mod. is :$val"
```

Relational Operators :

```
a=10
b=20

if [ $a -eq $b ]
then
   echo "$a -eq $b : a is equal to b"
else
   echo "$a -eq $b: a is not equal to b"
fi

if [ $a -ne $b ]
then
   echo "$a -ne $b: a is not equal to b"
else
   echo "$a -ne $b : a is equal to b"
fi

if [ $a -gt $b ]
then
   echo "$a -gt $b: a is greater than b"
else
   echo "$a -gt $b: a is not greater than b"
fi
```

```
if [ $a -lt $b ]
then
   echo "$a -lt $b: a is less than b"
else
   echo "$a -lt $b: a is not less than b"
fi

if [ $a -ge $b ]
then
   echo "$a -ge $b: a is greater or  equal to b"
else
   echo "$a -ge $b: a is not greater or equal to b"
fi

if [ $a -le $b ]
then
   echo "$a -le $b: a is less or  equal to b"
else
   echo "$a -le $b: a is not less or equal to b"
fi
```

Logical / Boolean Operators :

```
a=10
b=20

if [ $a != $b ]
then
   echo "$a != $b : a is not equal to b"
else
   echo "$a != $b: a is equal to b"
fi

if [ $a -lt 100 -a $b -gt 15 ]
then
   echo "$a -lt 100 -a $b -gt 15 : returns true"
else
   echo "$a -lt 100 -a $b -gt 15 : returns false"
fi

if [ $a -lt 100 -o $b -gt 100 ]
then
   echo "$a -lt 100 -o $b -gt 100 : returns true"
else
   echo "$a -lt 100 -o $b -gt 100 : returns false"
fi

if [ $a -lt 5 -o $b -gt 100 ]
then
   echo "$a -lt 100 -o $b -gt 100 : returns true"
else
   echo "$a -lt 100 -o $b -gt 100 : returns false"
```

```
fi
```

Arithmetic in Shell script using expr :

```
a=10
b=20

val=`expr $a + $b`
echo "sum is :$val"
val=`expr $a - $b`
echo "sub is :$val"
val=`expr $a \* $b`
echo "mul is :$val"
val=`expr $a / $b`
echo "div is :$val"
val=`expr $a % $b`
echo "modular is :$val"
```

String Operators :

```
str1="GLS"
str2="GLS"
str3=""
if [ $str1 = $str2 ]
then
echo "$str1=$str2:str1 is equal to str2"
else
echo "str1 is not equal to str2"
fi

if [ $str1 != $str2 ]
then
echo "$str1!=$str2:str1 is not equal to str2"
else
echo "str1 is equal to str2"
fi

if [ $str3 ]
then
echo "str3 is not empty"
else
echo "str3 is empty"
fi

if [ -z $str1  ]
then
echo "$str1:str1 length is zero"
else
echo "$str1:str1 length is not zero"
fi
```

```
if [ -n $str1  ]
then
echo "$str1:str1 length is not zero"
else
echo "$str1:str1 length is zero"
fi
```

File Handling Operator Demo :

Check whether the file is readable or not.

```
echo Enter a file name
read file

if [ -r $file ]
then
  echo "File has read access"
else
  echo "File does not have read access"
fi
```

Loops Demo

For Loop Demo1:

```
for var in 0 1 2 3 4 5 6 7 8 9 10
do
echo $var
done
```

For Loop Demo2:

```
for i in `ls`
do
 if [ -f $i ]
 then
 echo "$i"
fi
done
```

While Loop :

```
a=1
while [ $a -le 10 ]
do
        echo $a
        a=` expr $a + 1 `
done
```

Until Loop :

```
i=0
until [ $i -eq 5 ]
do
 echo $i
  i=$((i+1))
done
```

break statement :

```
a=0
while [ $a -lt 10 ]
do
echo $a
if [ $a -eq 5 ]
then
break
fi
a=`expr $a + 1`
done
```

continue statement :

```
i=0
while [ $i -lt 5 ]
do
 i=$(($i+1))
 if [ $i -eq 2 ]
then
continue
fi
echo "Number : $i"
done
```