Shell Scripting - Basic

Operators

- Arithmetic Operators
- Relational Operators
- Boolean Operators
- String Operators
- File Test Operators

Airthmetic Operators

- The following points need to be considered while adding −

- There must be spaces between operators and expressions. For example, 2+2 is not correct; it should be written as 2 + 2.

- The complete expression should be enclosed between ‘ ‘, called the backtick.

Airthmetic Operators (Example)

- #!/bin/sh

  a=10

  b=20

  val=`expr $a + $b`

  echo "a + b : $val" #will produce 30

  val=`expr $a - $b`

  echo "a - b : $val" #will produce -10

  i

```
val=`expr $a \* $b`
echo "a * b : $val" #will produce 200

val=`expr $b / $a`
echo "b / a : $val" # will produce 2

val=`expr $b % $a`
echo "b % a : $val" # will produce 0

if [ $a == $b ]
then
   echo "a is equal to b"
fi
```

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

Airthmetic operators

- + for addition
- - for substraction
- * for multiplication
- / for division
- % for Modulus
- = for assignment
- == for equality
- != for non-equality

Relational Operators

- -eq for equalitity # if [$a -eq $b]
- -ne for non – equality # if [$a -ne $b]
- -gt for greater than # if [$a -gt $b]
- -lt for less than # if [$a -lt $b]
- -ge for greater than or equals

  # if [$a -ge $b]
- -le for less than or equals

  # if [$a -le $b]

Boolean operators

- ! Not operator # [!false]
- -o OR operator # if [$a -gt 0 -o $a -eq 0]
- -a AND operator # if [$a -gt 0 -a $a -eq 99]

String operators

- = to check equality (only for string)

  a = “pqr”

  b = “pqr” # if [$a = $b]

- != to check inequality # if [$a != $b]
- -z Checks if the given string operand size is zero; if it is zero length, then it returns true.

  #[-z $a] is not true.

- -n Checks if the given string operand size is non-zero; if it is nonzero length, then it returns true. #[-n $a] is true
- [$a] will not return false.