

GLS University
Faculty of Computer Applications & IT
0301407 LINUX SHELL SCRIPTING (PRACTICAL)

Arithmetic Operators

Operator	Description
+ (Addition)	Adds values on either side of the operator
- (Subtraction)	Subtracts right hand operand from left hand operand
* (Multiplication)	Multiplies values on either side of the operator
/ (Division)	Divides left hand operand by right hand operand
% (Modulus)	Divides left hand operand by right hand operand and returns remainder
= (Assignment)	Assigns right operand in left operand
== (Equality)	Compares two numbers, if both are same then returns true.
!= (Not Equality)	Compares two numbers, if both are different then returns true.

Relational Operators

Operator	Description
-eq	Checks if the value of two operands are equal or not; if yes, then the condition becomes true.
-ne	Checks if the value of two operands are equal or not; if values are not equal, then the condition becomes true.
-gt	Checks if the value of left operand is greater than the value of right operand; if yes, then the condition becomes true.
-lt	Checks if the value of left operand is less than the value of right operand; if yes, then the condition becomes true.
-ge	Checks if the value of left operand is greater than or equal to the value of right operand; if yes, then the condition becomes true.
-le	Checks if the value of left operand is less than or equal to the value of right operand; if yes, then the condition becomes true.

Logical/Boolean Operators

Operator	Description
!	This is logical negation. This inverts a true condition into false and vice versa.
-o	This is logical OR . If one of the operands is true, then the condition becomes true.
-a	This is logical AND . If both the operands are true, then the condition becomes true otherwise false.

String Operators

Operator	Description
=	Checks if the value of two operands are equal or not; if yes, then the condition becomes true.
!=	Checks if the value of two operands are equal or not; if values are not equal then the condition becomes true.
-z	Checks if the given string operand size is zero; if it is zero length, then it returns true.
-n	Checks if the given string operand size is non-zero; if it is nonzero length, then it returns true.
str	Checks if str is not the empty string; if it is empty, then it returns false.

File Operators

Operator	Description
-d file	Checks if file is a directory; if yes, then the condition becomes true.
-f file	Checks if file is an ordinary file as opposed to a directory or special file; if yes, then the condition becomes true.
-r file	Checks if file is readable; if yes, then the condition becomes true.
-w file	Checks if file is writable; if yes, then the condition becomes true.
-x file	Checks if file is executable; if yes, then the condition becomes true.
-s file	Checks if file has size greater than 0; if yes, then condition becomes true.
-e file	Checks if file exists; is true even if file is a directory but exists.