Shell Programming

A Necessity for all Programmers

Conditional Execution

Nagesh Karmali | Firuza Karmali

IITBX Infinite Learning

Department of Computer Science and Engineering
IIT Bombay

You will learn to ...

- Conditional Statements
- Numerical and String comparisons
- Tests on Files
- Logical operators

Types of Conditional Statements

Example 1 - if

```
if [ condition ]
then
   ...
fi
```

Example 2 - If-Else

```
if [ condition ]
then
   ...
else
   ...
fi
```

Example 3 - If-Elif-Else

```
if [ condition ]
then
   ...
elif [ condition ]
then
   ...
...
else
   ...
fi
```

Condition: **$Operand1 Operator $Operand2**

Note: The space after [and before] while specifying condition

Numerical Comparison

Symbol	Operator	Example
$=$	**-eq**	$num1 -eq $num2
$\neq$	**-ne**	$num1 -ne $num2
$>$	**-gt**	$num1 -gt $num2
$<$	**-lt**	$num1 -lt $num2
$\geq$	**-ge**	$num1 -ge $num2
$\leqslant$	**-le**	$num1 -le $num2

String Comparison

Symbol	Operator	Example
$=$	$=$	\$str1 $=$ \$str2
$\neq$	!-	\$str1 != \$str2
length > 0	-n	-n \$str1
length $= 0$	-z	-z \$str1
not null		\$str1

Testing Files

Description	Operator	Example
File size is > 0	-s	-s $file
File is not a directory	-f	-f $file
Directory	-d	-d $file
Character special file	-c	-c $file
Block special file	-b	-b $file
You have read permission for the file	-r	-r $file
You have write permission for the file	-w	-w $file
You have execute permission for the file	-x	-x $file

Logical Operators

Description	Operator	Example
AND	-a	[$num1 -gt 0 -a $num2 -lt 0]
OR	-o	[$num1 -gt 0 -o $num2 -lt 0]
NOT	!	[! $num1 -gt 0]

Now, you can ...

- Execute statements when a condition is satisfied
- Using different operators

Thank you