If / Else Statements (Shell Scripting)

Shell scripts use fairly standard syntax for if statements. The conditional statement is executed using either the `test` command or the `[` command. In its most basic form an if statement is:

```
#!/bin/bash

if [ "$#" -gt 0 ]
then
    echo "There's Beans"
fi

if [ "$1" = "cool" ]
then
echo "Cool Beans"
fi
```

(Notice that the `fi` is simply `if` spelled backwards). To add an else, we just use standard syntax.

```
#!/bin/bash

if [ "$1" = "cool" ]
then
    echo "Cool Beans"
else
    echo "Not Cool Beans"
fi
```

Adding an else-if statement structure is used with the `elif` command.

```
#!/bin/bash

if [ "$1" = "cool" ]
then
    echo "Cool Beans"
elif [ "$1" = "neat" ]
then
    echo "Neato cool"
else
    echo "Not Cool Beans"
fi
```

An if statement does not require two parameters. You can use single flags as well. The following code tests to see if the first parameter is a file or not.

```
#!/bin/bash

if [ -f "$1" ]
then
    echo "$1 is a file"
else
    echo "$1 is not a file"
fi
```

There are many different ways that an conditional statement can be used. These are summarized here:

String Comparison	Description
Str1 = Str2	Returns true if the strings are equal
Str1 != Str2	Returns true if the strings are not equal
-n Str1	Returns true if the string is not null
-z Str1	Returns true if the string is null
Numeric Comparison	**Description**
expr1 -eq expr2	Returns true if the expressions are equal
expr1 -ne expr2	Returns true if the expressions are not equal
expr1 -gt expr2	Returns true if expr1 is greater than expr2
expr1 -ge expr2	Returns true if expr1 is greater than or equal to expr2
expr1 -lt expr2	Returns true if expr1 is less than expr2
expr1 -le expr2	Returns true if expr1 is less than or equal to expr2
! expr1	Negates the result of the expression
File Conditionals	**Description**
-d file	True if the file is a directory
-e file	True if the file exists (note that this is not particularly portable, thus -f is generally used)
-f file	True if the provided string is a file
-g file	True if the group id is set on a file
-r file	True if the file is readable
-s file	True if the file has a non-zero size
-u	True if the user id is set on a file
-w	True if the file is writable
-x	True if the file is an executable

if-else-statements -o -z

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