Shell Scripting Cheat Sheet

Components of a Bash Script

```
#!/bin/bash

# Comments comments comments
# Comments comments

Command1
Command2    # this is a comment too

exit
```

Executing a Bash Script

```
$ bash script_name.sh

or

$ chmod +x script_name.sh
$ ./script_name.sh
```

There is essentially no *functional* difference between the two methods (as long as the contents are bash).

Initialize Variables

```
a=5
b=10
c="Hello"
echo "a is $a, and b is $b"
echo "$c, world!"
```

Simple Math

```
c=$(( $a+$b ))
echo $c

(( c++ ))
echo $c
```

Conditionals

```
if [ conditional 1 ]
then
      command 1
elif [ conditional 2 ]
then
      command 2
else
      command 3
fi
```

Tests

-eq	equal to
-ne	not equal to
-lt	less than
-gt	greater than
-ge	greater than or equal to
-le	less than or equal to
str1 == str2	strings equal?
str1 != str2	strings unequal?

-f *file*	does file exist?
-r file	is file readable?
-w file	is file writable?
-w file	is file executable?
-d file	is it a directory?
-s file	is file non-empty?
$ man test	to see more

While Loop

```
while [ condition is true ]
do
      command1
      command2
done
```

For Loop

```
for VAR in list
do
      command1
      command2
done
```

Getting External Data

```
# Get info from terminal
me=` whoami `
echo $me

# Get info from user
echo "Enter a number"
read a
echo "$a"
```

Special Variables

$*	list of parameters passed on command line
$#	number of arguments on the command line
$1	the first parameter from command line
$2	the second parameter (etc)
$0	the name of the program
$?	the last exit status
$$	process ID of current shell