Lecture 12

--would that work if i add a small space between entries? experiment
somedata has a small csv list of uk-500 companies.
print firstname lastname and address.

```
$ cut -d"," -f 1,2,4 somedata
```

--- exit status
Every command that is executed return back a value 1 if failed and 0 if succeed. You can get it by

```
$echo $?
```

--- write about if clauses
see
l10-ifthen.sh

--How can you get rid of "cp: cannot stat ..."
(Hint: bit bucket)
l10-ifthenv2.sh

----using if with numbers
see l10-ifelsenumbercomparison.sh

--comparison operators are
-eq equal to
-ne not equal to
lt less than
-le less than or equal to
-gt greater than
-ge greater than or equal to

ATTENTION: watch out for space after [and before]

--Exercise: write a program to check for a single character input, i.e. reads an input and prints "single character" message
if input is single character.
Hint pipe to wc -c   why?
Hint: does it work? Have you considered carriage return? what?

NOT INCLUDE: if [`echo $var | wc -c` -eq 2] # 2 to count carriage return

You also have logical operators such as
-a for and
-o for or
see l10-logicaland.sh
Exercise: write a program to extend the previous exercise and check for a single character and then if the character
is a,b or c prints the message "abc" and otherwise print the message "notABC".

---- working with files
- checking somethis is file not a directory

```
$ if [ -f sample ]; then echo "file exist"; fi
```

-- there are a whole bunch of file operations:
-s file exists and is not empty
-f file exists and is not a directory
-d directory exists
-x file is executable
-w file is writable
-r file is readable
-z File has 0 character return t

Exercise: write a script that checks if a file exists and is writeable. Print appropriate messages.

Exercise: write a program to add index.html file into every directory that does not have one.

--- until do done
see example l12-01-untildodone.sh

------ Internal file separator used when sequences are separated
see example l12-02-IFS.sh
Good practice is to researve a variable for the old IFS and set it back·

------ sed
Stream editor used when want to replace format

```
cat afile | sed 's/pattern/replacement'
$ echo window | sed 's/o/0/' | sed 's/i/1/'
w1nd0w
```

This replaces the FIRST occurance. If you want all occurrences add g

What would this do?

```
$ echo `ls -al` | sed 's/o/0/g' | sed 's/i/1/g' > afile
```

deleting something is done with '/pattern/d'
What does this do?

```
$ sed '/^$/d' afile
```

Exercise: write a program that replaces numberical values with number in a file. For example 123 replaced with OneTwoThree. (Hint if you dont want to make a new file just use sed -i)

You can use any regular expression and you can use & to match it. Suppose you want to put words in paranthesis for example abc in (abc)

```
$ echo My plug in baby |sed 's/\w\+/(&)/g'
(My) (plug) (in) (baby)
```

a good tutorial on sed is at http://www.grymoire.com/Unix/Sed.html