Building Blocks

wildcards can be used with any command that accepts filenames as arguments

*	All files
a*	All files that start with 'a'
b*.txt	All files that start with 'b' and end in '.txt'
file???	All files that begin with 'file' and are followed by exactly 3 characters
[abc]*	All files that begin with either 'a', 'b', or 'c'

piping redirect the output of one program into the input of another

```
eureka@ubuntu:~$ ls | sort
Desktop
Documents
Downloads
epd
examples.desktop
learn_pandas
Music
new_test.csv
new_test_file
Pictures
Public
redis-2.6.2
redis-2.6.2.tar.gz
sites
Templates
test
test_file
Videos
workspace
```

when piping, exit code returned is only the last part of the pipe. The exit codes are provided in the PIPESTATUS special array. cmd1 exit code is in ${PIPESTATUS[0]}, cmd3 exit code in ${PIPESTATUS[2]}, $? is always the same as ${PIPESTATUS: -1}. ${PIPESTATUS: *} lists all exit codes

<table>
<tr><td colspan="2">eureka@ubuntu:~$ who
eureka tty7 2013-07-01 21:22
eureka pts/0 2013-07-01 21:26 (:0)</td></tr>
<tr><td>eureka@ubuntu:~$ who |grep hi</td><td>eureka@ubuntu:~$ echo ${PIPESTATUS[$?]}
1</td></tr>
<tr><td>eureka@ubuntu:~$ who |grep hi</td><td>eureka@ubuntu:~$ echo ${PIPESTATUS[-1]}
1</td></tr>
<tr><td>eureka@ubuntu:~$ who |grep hi</td><td>eureka@ubuntu:~$ echo ${PIPESTATUS[1]}
1</td></tr>
<tr><td>eureka@ubuntu:~$ who |grep hi</td><td>eureka@ubuntu:~$ echo ${PIPESTATUS[0]}
0</td></tr>
<tr><td>eureka@ubuntu:~$ who |grep hi</td><td>eureka@ubuntu:~$ echo ${PIPESTATUS[*]}
0 1</td></tr>
</table>