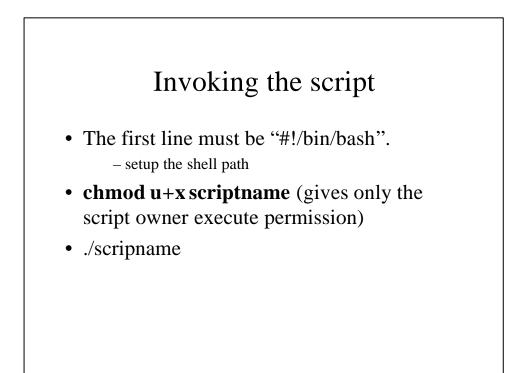
# Introduction to Bash Shell

#### What is Shell?

- The shell is a command interpreter.
- It is the layer between the operating system kernel and the user.

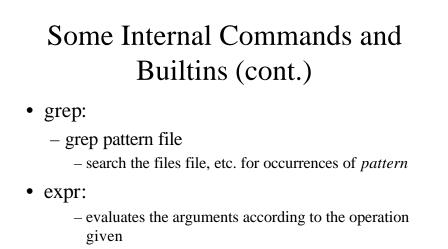
# Some Special characters used in shell scripts

- #:Comments
- ~:home directory



#### Some Internal Commands and Builtins

- getopts:
  - parses command line arguments passed to the script.
- exit:
  - Unconditionally terminates a script
- set:
- changes the value of internal script variables.
- read:
  - Reads" the value of a variable from stdin
  - also "read" its variable value from a file redirected to stdin
- wait:
  - Stop script execution until all jobs running in background have terminated

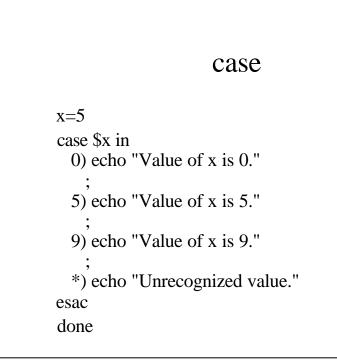


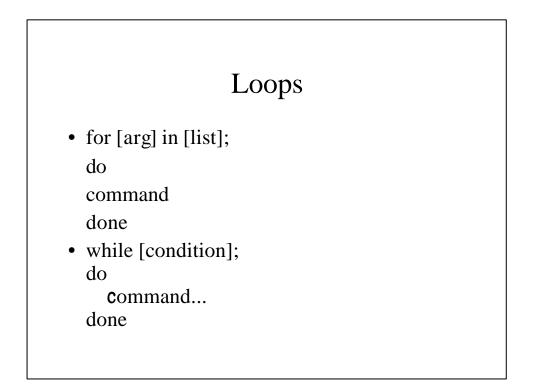
- y=`expr \$y + 1` (same as y=\$((\$y+1))

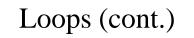
## I/O Redirection

- >: Redirect stdout to a file, Creates the file if not present, otherwise overwrites it
- <: Accept input from a file.
- >>: Creates the file if not present, otherwise appends to it.
- <<:
  - Forces the input to a command to be the shell's input, which until there is a line that contains only *label*.
  - cat >> mshfile << .</p>
- |:pipe, similar to ">",

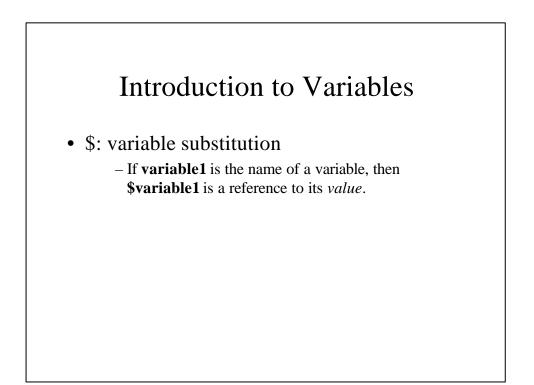
if
if [ condition ] then
command1
elif # Same as else if
then
command1
else
default-command
fi







- break, continue
  - break command terminates the loop
  - continue causes a jump to the next iteration of the loop



#### Pattern Matching

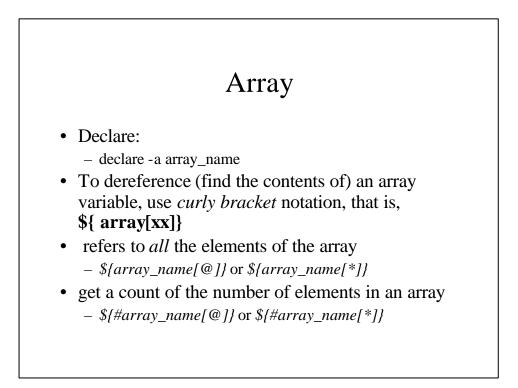
- \${variable#pattern}
- \${variable##pattern}
- \${variable%pattern}
- \${variable%%pattern}

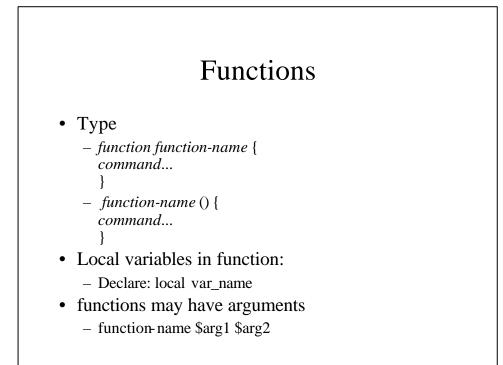
#### **Examples of Pattern Matching**

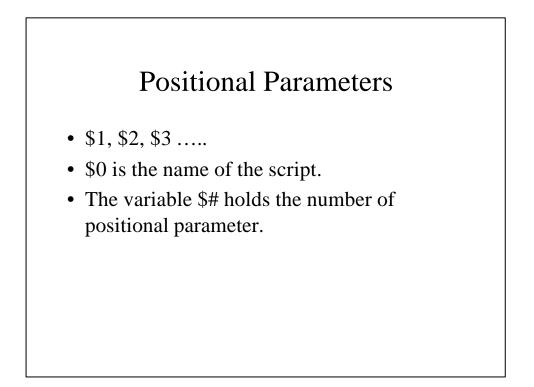
x=/home/cam/book/long.file.name echo \${x#/\*/} echo \${x##/\*/} echo \${x%.\*} echo \${x%%.\*} cam/book/long.file.name long.file.name /home/cam/book/long.file /home/cam/book/long

#### Aliases

- avoiding typing a long command sequence
- Ex: alias lm="ls -l | more"

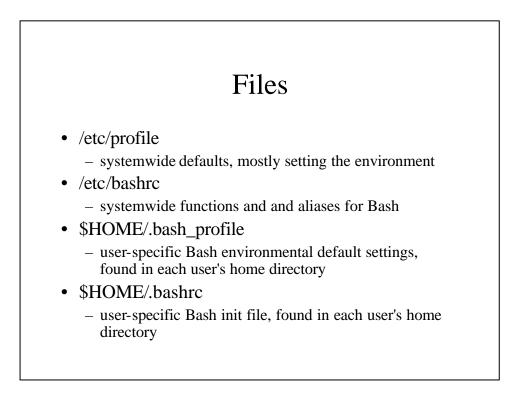






#### Positional Parameters in Functions

- \$1, \$2, \$3....
- Not from \$0



## Debugging

- The Bash shell contains no debugger, nor even any debugging-specific commands or constructs.
- The simplest debugging aid is the output statement, echo.
- Set option
  - -n: Don't run command; check for syntax error only
  - -v: Echo commands before running them
  - -x: Echo commands after command-line processing