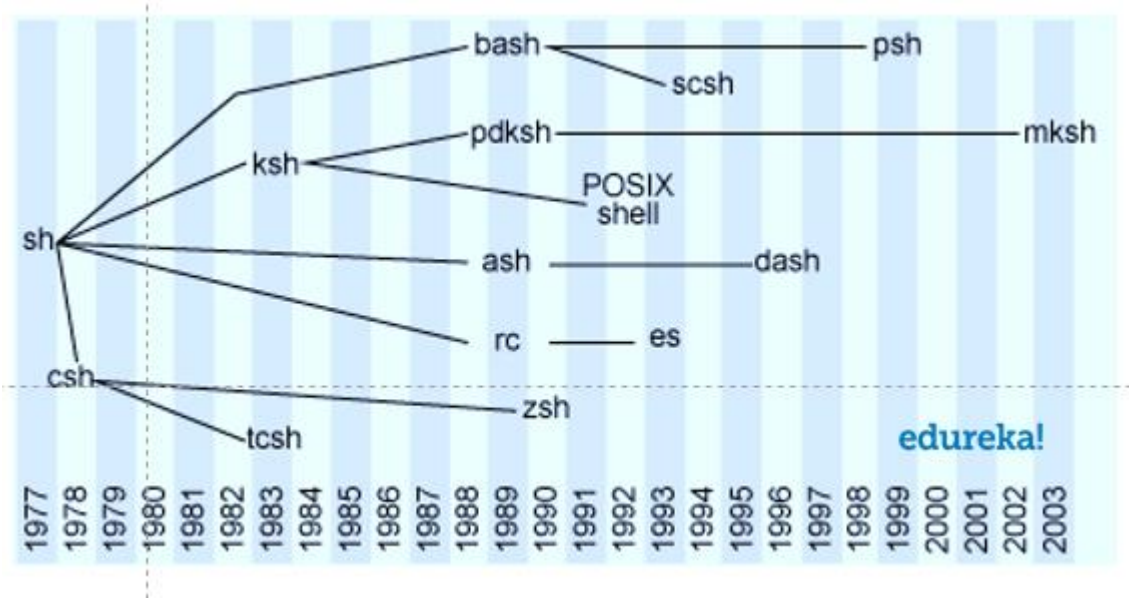
Programming Languages and Tools: Programming with C++ CS:3210:0003

Lecture/Lab #10

Definitions

- Kernel – core of the OS
- Terminal – program that provides command-line interface
- Shell - program that executes commands using the kernel
- Many Linux shells:
  1. sh – Bourne shell
  2. csh – C shell
  3. ksh – Korn shell
  4. bash – bash shell
- `echo $0` to print shell being used



Commands

Command	Description
`cd destination`	Change directory
`ls`	List contents
`mkdir dirname`	Make directory
`rm filename`	Remove
`chmod`	Change permissions
`cat`	Concatenate files and print
`touch filename`	Create file
`man command`	Show command manual
`which app`	Show location of app

Caution!

- Some commands might be irreversible
- There is no recycle bin, so `rm` will permanently delete files
- Make sure you know what you’re doing

Environment Variables

- Linux variables work just like C++ variables
- Environment variables are special variables (they exist in all OSs)
- Used to set up the Linux environment
- Use env command to show all environment variables

Variable	Description
$HOME	Stores home directory
$SHELL	Stores name of Linux shell
$PATH	Stores directories to look for applications in

PATH Variable

- Specifies directories to be searched to find a command
- As, we've seen with our binaries, applications are executed using: `./appname`
- However, if the shell knows where to look for appname, we can call it from anywhere in the system
- The PATH environment variable stores the locations of all directories that the shell will look in for an application