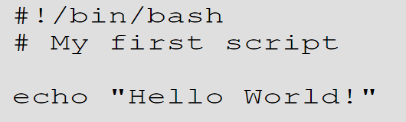
About

* Linux is an open-sourced equivalent to UNIX. It is mainly used in servers because it is free, fast, and secure. Most viruses can’t run on Linux.
* Linux Shell: A programming language that has a command line interface (typically) where the user enters an input which is then executed. Once executed, the output is displayed in the terminal. There are many different shells that can be used, and each has its own set of recognized commands and functions.
* Shell Prompt: The command prompt, characterized by the dollar symbol “$”, is entered by the shell “prompting” the user for a command. Once the user presses enter, the shell reads the command, determines what the command is, and then executes the command if able.

Build Scripts

* What is a shell script?
  + A shell script is a text file that contains a list of commands for the shell to execute. A shell script may include typical programming concepts, such as functions, loops, and conditional statements. The script should also contain comments, characterized by a “#” symbol at the beginning of the comment. Comments help others follow the code logic; it describes the code. Scripts are interpreted, they are not compiled.
* Steps to writing a shell script
  + Write a script
    - Use a text editor
      * E.g. vi/vim, emacs, nano, gedit, kwrite?
    - Example first script

The first line tells the shell what program to interpret the script with -> called a “shebang”

The second line is a comment

The third line prints (“echos”) the line to the display

* + Give the shell permission to execute the script
    - E.g. $chmod +x hello.sh
  + Put the script somewhere the shell can find it
  + Execute the script
    - E.g. $./hello.sh

-link to <https://www.tutorialspoint.com/unix/unix-what-is-shell.htm>

-make example shell scripts

Download – link to download linux (linux.org)

* Directions on picking a distribution (see distributions page for more info)

Command Line

* Navigation – one gif to show the first 3 commands, another gif for locate
  + Pwd – outputs the absolute path to the current directory
  + Cd – goes to the given directory
  + Ls – outputs the files in the given directory. If no directory is given in the command, then it assumes the current directory.
    - Ls -a – shows hidden files
  + Locate – Locates files.
    - E.g. locate hello
      * Looks for any files that contain the word hello
    - Locate -i – ignores the case (upper/lowercase doesn’t matter)
    - Multiple words can be separated by \*
      * E.g. locate \*hello\*this
* File Manipulation – 3 gifs to show the commands bundled as numbered
  1. Mv – Moved files. Can also be used to rename a file. Takes 2 arguments
     + the name of the current file
     + the name of the new file
  2. Cp – Copies files. Takes 2 arguments
     + the location of the file to copy
     + the location of where to copy the file into
  3. Rm – Deletes files or directories that contains files
     + Rm -r – deletes just the directory and not the containing file
  4. Mkdir – Creates a directory/folder
  5. Rmdir – Deletes an empty directory
  6. Chmod – Changes the permissions of a given file
  7. Touch – Creates an empty file of any type
  8. Echo – Moves data into a file
     + Uses >> to represent the end of the data and the start of the file name for the sata to be entered into
     + E.g. echo hello world >> file.txt
* Application – 1 gif of all or 1 gif of one of them and we will say that the one kind of represents all of them OR a separate gif to show the different special commands like how to save the file
  + Cat – Displays the content of a file
  + Nano / Vi – Text editors that are already installed in the Linux command line.
    - Nano – denotes keywords with colors and can recognize most languages
    - Vi – simpler than nano
    - Ctrl+X, then Y for yes with save the file
* Key “shortcuts”:
  + Clear – clears the terminal
  + Ctrl+C – stops any commend in the terminal safely
  + Ctrl+Z – Force stops
  + Exit – exits from the terminal
  + Sudo halt – powers off the computer
  + Sudo reboot – reboots the computer
* Separate reference page with many more commands and a brief description
  + Man – to know more about a command and how to use it
    - E.g. man cd
  + - - help – Shows how the command can be used
    - E.g. cd –help
  + Sudo – Executes a given command with administrator or root priveledges
    - “SuperUser Do”
  + Df – shows the available disk space in each partition on the system
    - Df -m – shows in megabytes
  + Du – shows the disk usage of a given file or folder
  + Tar – can compress or decompress .tar files
    - Tar -cvf – creates a tar file
    - Tar -xvf – decompressed a tar file
    - Tar -tvf – lists the contents of the tar file
    - Etc.
  + Uname – shows information on your Linux distribution (“distro”)
  + Apt-get – installs packages
  + Hostname – outputs your hostname and IP address
  + Ping – checks your connection to a server
    - E.g. ping google.com
    - Used to check for internet connection
  + Link to https://maker.pro/linux/tutorial/basic-linux-commands-for-beginners

Distributions

* All distributions are mainly the same. They are all developed from the same Linux kernel. The main difference are different applications installed by default, different init systems, different package methods and frontends, and different release schedules. The best one is different for each person; it is a matter of which the user find easiest and most convenient to use.
* <https://distrochooser.de/en> to help choose a distribution
* Ubuntu
* Mint
* Slackel
* Zorin
* Netrunner
* CentOS
* Xubuntu
* PureOS
* BunsenLabs
* Neptune
* Debian
* Arch
* Mageia
* Kubuntu
* Kali
* Fedora
* OpenSUSE
* PCLinuxOS
* Manjaro
* Black Lab
* Slackware
* Red Hat
* Puppy
* Bodhi
* Solus