Section-4 Getting Help

Overview
- The man page
- type command
- which command
- Help command
- The 4 manual page sections
- Navigating a man page.

Finding information about command.

man page
- The man page, short for manual page, are built in form of documentation available on nearly all unix like operating systems.
- The specific contents vary from one operating system to another, but at a bare minimum the man page include information on commands and their usage.
- To read doc
  run <u>man command</u>,
          ↓
        syntax.
    Ex:- man ncal.   (ref → L manPage Example Output.png).
- display info on ncal (q to exit

Navigating and searching a man page
↑↓ → normal   — man pages are displayed using LESS program
space → nextpage
B → Back one page
F → nextpage
search → /—w
            ↓
          option

Parsing man pages synopsis
In general each man page will follow this pattern:
- the title/ name of the command with a short explaination of its purpose
- synopsis of the command syntax
- Description of the all the command options.

ncal [-31bh JeOSM] [-A number] [-B number] [-d yyyy-mm] [year].
- Anything listed in square brackets is OPTIONAL, the only required partie ncal.
- the Above synopsis for ncal tells us that we can use the following options without providing any sort of additional parameter:
    -3,-1,-b,-h,-J,-e,O,-S,-M
  to keep things brief they are all lumped together as
    [-31bhJeOSM]
- Then we see other options in square brackets followed by their expected parameters:
  [-A number] means the -A option expects a number. [-d yyyy-mm] indicates that the -d option expects us to pass the date in the format: yyyy-mm like 1980-04
- Finally, at the end we see [year] which means that we can pass a year as a parameter

echo [OPTION]... [STRING]...
- An ellipsis (...) indicates that one or more of the preceding oprand are allowed.
- [OPTION]... means that we can pass more than one option to echo.
- [STRING]... indicates that we can pass multiple string to echo. For example, we can run echo hello and also echo hello there you cutie little chiken.

cp [option] SOURCE DECT

So for all the operands we've seen have been optional, but some commands do require certain arguments in order to run. In a man page synopsis, required operands are **not** wrapped in square brackets

In cp command we see that we can optionally provide one or more options. SOURCE indicates that we must pass one source, and DECT indicates that we must pass a destination as well. those two arguments are required.

Manual sections.

- The manual is broken into 9 different sections, each covering a specific topic in depth.
  1. User commands.
  2. System calls (functions provided by the kernel).
  3. library calls (functions within program libraries).
  4. Special files (usually found in /dev).
  5. File formats and conventions, eg. /etc/passwd.
  6. Games.
  7. Miscellaneous (including macro packages and conventions).
      eg man(7), groff(7), man-pages(7)
  8. System administration commands (usually only for root)
  9. Kernel routines [Non-standard].

→ > man man

  man -k cmd → Gives short discription and module number of the cmd we search for

  man [number] cmd → gives cmd from number module

  Ex man 5 passwd.

Types of commands:

- There are really four types of commands:
  - An executable program, (usually stored in /bin, /usr/bin, or /usr/local/bin. These all compiled binary files (hence bin).
  - A build in shell command. These command are part of the shell (bash in our case).
  - A shell function.
  - An alias

command 8 - type - the type command will tell us.... the type of a command
              (ret - 5,6 / img).

command 9 - which [to find the exact location of an executable run which command.
                    [this only works for executables (not built-in shell commands
                    or alias.
                    - where the executable command is located.

// some commands such as shell built in commands does not have a manpage
- we can find documentation for those commands using the help command.
- cd is a shell command
            → help cd.
- there is not hard bound rule that all shell commands does not have man page as
            → type pwd → It is shell builtin
            → man pwd → gives us man page

command 10 - help - find documentation for commands that don't have man pages

command	descp.
clear	— clears the prompt
date	— displays the current date and time
ncal	— vertical calendar
cal	— Horizontal calendar
echo	— takes Argument and prints it back
sort	— sorts the contents of a file
rm	— removes/deletes a file
type	— It tells us the type of command. out of 4 types
which	— where the executable command is located.
help	— find documentation for commands with no man pages.