Terminal Day 2: Cheat Sheet

Key Terms

- **Command Line Structure**: The structure for a command line is `command` followed by one or more `options` and one or more `arguments` (if required).

    - **Example**: `find . -name contacts.txt`

        - `find` is the `name of the command`
        - `.` means to start the search from the current directory
        - `-name` is the `option` (find by name)
        - `contacts.txt` is the `argument` (file to find)

- **find Command**: The `find` command finds all directories and files in and below the current directory.

    - **Example**: This command will find all files with the extension `.txt` .

        - `$ find . -type f -name '*.txt`

Execute a command using the `find` command: The `find` command can be used to execute a command (e.g., cp, mv, echo) on any files that are found. The command syntax is: `find from option argument -exec command {} \;` where:

- **from** is the location to start search from, use "." to start from the current directory
- **option** is a `find` option (e.g. -iname)
- **argument** is the filename(s)
- **exec option** - `exec`
- **command** is a unix command (e.g., cp, mv)
- **{}** indicates where in the command line to read in each file found
- **\;** ends the line (the `\` escapes the `;`)

Example: `find` all files and then output the text `I found file {file path}`

```
 *  `$ find . -type f -exec echo "I found file" '{}' \; | more`
 * I found file ./tmp/tempfile
```

grep Command: Use the `grep` command to `search inside text files` for specific text. `grep` can be used to search a single file or a whole directory of files. By default searches are case-sensitive but case-insensitive searches can be done as well.

The command syntax is: grep [`option(s)`] pattern [`file(s)`].

- **Example**: This command will `grep` (search) for the word `webmin` `/etc/services` file.

    - `$ grep webmim /etc/services`

wc Command: The `wc` command is used to `count` the number of `lines` , `words` and `characters` in a text file.

The command syntax is wc [`options`] [`file_name(s)`].

- **Example**: This command outputs the number of lines, words and characters in the file `index.html`

    - `$ wc index.html`

Key Commands

Operations on files

find Command

Display instructions for the find command

```
$ man find
```

Find all the files and directories in the current tree

```
$ find
```

List files in a specific directory

```
$ find ./demo
```

Find a file by name (case sensitive) in the current directory

```
$ find  . -name index.html
```

Find a file by name (not case sensitive)

```
$ find  . -iname index.html
```

Find all files in a directory

```
$ find  . -type f
```

Find all directories

```
$ find  . -type d
```

Find all the .txt files

```
$ find . -type f -name '*.txt'
```

Find directories that begin with Demo

```
$ find . -type d -name 'Demo*'
```

Find files that are over 5MB in size

```
$ find ~/joe -size +5M
```

Find files before or after a creation time

```
$ find . -cmin +2
```

Find all html files and copy them to the directory /joe

```
$ find . -name '*.html' -exec cp '{}' ~/joe/ \;
```

grep Command

Display instructions for the grep command

```
$ man grep
```

grep (search) for the word "http" in the file index.html

```
$ grep http index.html
```

grep (search) for the word "http" in the files file1.html file2.html file3.html

```
$ grep http file1.html file2.html file3.html
```

grep (search) recursively for the word "http" in all files in a directory tree

```
$ grep -r http
```

grep (search) for the word 'inet' from the output of the "ip addr show" command

```
$ ip addr show | grep inet
```

grep (search) for the word 'Master' ignoring case

```
$ grep -i Master
```

wc Command

Display instructions for the wc command

```
$ man wc
```

Display the number of lines, words and characters in the index.html file

```
$ wc index.html
```

Display the count for all of the text files within a directory

```
$ wc . *
```

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