Introduction to the Command Line

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About Me

- **Started in tech in 2000, Comp Sci degree**

- **Only knew windows before**

- **Command line was a mystery to me**

- **Grew to love it**

- **Book on bash, spend most of my time on the command line today**

Pre-requisites

- **Access to a command line**

- **Ideally bash**

- **Nice to have – knowledge of basic bash**

  - **Introduction to Bash course available**

  - **Pipes most common feature likely to be used**

Why This Course?

- **Command line is efficient**

- **For people who are:**
  - **New to it**
  - **Want to learn more about it**
  - **Want to progress further**

- **NOT a complete list of all commands used**
  - **Try to cover wide ground, beginner to expert**
  - **Try to show how to learn more**

We Will Cover

- **A lot of commands**

- **Some techniques**

- **Some key concepts**

  - **Readline**
  - **History of terminals**

- **Anything you want...**

Structure of Course

- **Part I – The Core**
  - **Commands**

- **Part II – Text and Files**
  - **Text and file manipulation and search**
  - **Readline**

- **Part III – Networking and System (Time Permitting)**
  - **Web requests**
  - **Network debugging**
  - **Service management**
  - **System monitoring**

Poll - Experience

- **Never used command line**

- **Used a little (less than one year)**

- **Use rarely (longer than a year)**

- **Use all the time**

Discussion

- **What do you want to learn about?**

- **What problems have you faced?**

Materials

https://github.com/ianmiell/introduction-to-the-command-line

Part I – Core Commands

- **cd**

- **mkdir**

- **rm**

- **ls**

- **cat**

- **echo**

Part I – Core Commands

- **less**

  - **How to use + tips**

- **man**

  - **How to use + tips**

Part I – Exercise / Break

Part II – Globs vs Regexps

- **Globs vs Regexps**
  - **Commonly confused – similar but different**

- **Both used to select things:**
  - **Eg glob wildcard, eg select all files with:**
    - `ls *`
  - **Regexp wildcard is '.*', eg:**
    - `grep "before.*after" *`

- **Shells use globs, programs use regexps.**
- **If it's in quotes, the program uses it.**

Part II – Text and File Manipulation

- **grep**
- **tr**
- **sed**
- **sort / uniq**
- **tail**
- **diff / sdiff**

Part II – Readline Shortcuts

- **Readline**

  - **CTRL + a**
  - **CTRL + e**
  - **CTRL + r**

Part II – Exercise / Break

Part III – Networking and System

- **Networking:**

  - **Web requests**
  - **TCP connections**
  - **ICMP connections**
  - **DNS**

Part III – Networking and System

- **System:**

  - **top**
  - **ps**
  - **kill**

Wrapup Q&A

Thanks!

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