

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**

Discussion - 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**



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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

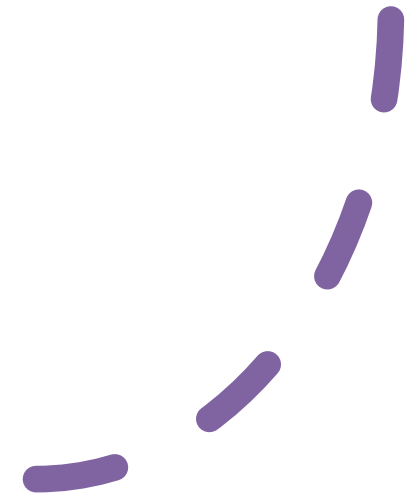
Part III – Networking and System


- **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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