

User Interfaces

- Further reading
 - Richie
 - chapter 3
 - Tanenbaum Operating Systems
 - 1.3.3 The Shell
 - 1.4 System calls

Overview

- classes of user
- types of user interface
 - system calls
 - command languages
 - also called command line interface (CLI)
 - graphical user interfaces (GUI)

Classes of User

- programmer
- operator (administrator, or root)
- end user
- *notice that these classes define roles not individuals*

System Call Interface

- application programmers interface (API)
 - a programming interface via system calls
- Unix System calls via C functions (Ritchie 3.2), (Tanenbaum 1.4)
 - GNU/Linux manual pages section 2
- Windows
 - C++ library (MFC - Microsoft Foundation classes) which sit on top of Win 32 API (C libraries)

CLI

- allows more direct interaction with OS
- useful to operators and programmers
- importance of automation of activities
- Unix
 - shell programming and commands
 - [UnixHelp](http://unixhelp.ed.ac.uk) (<http://unixhelp.ed.ac.uk>)

CLI

- MS Windows
 - eg. Windows Scripting

GUI

- historical developments
- evolution of MS Windows
- X Windows
- MacOS X