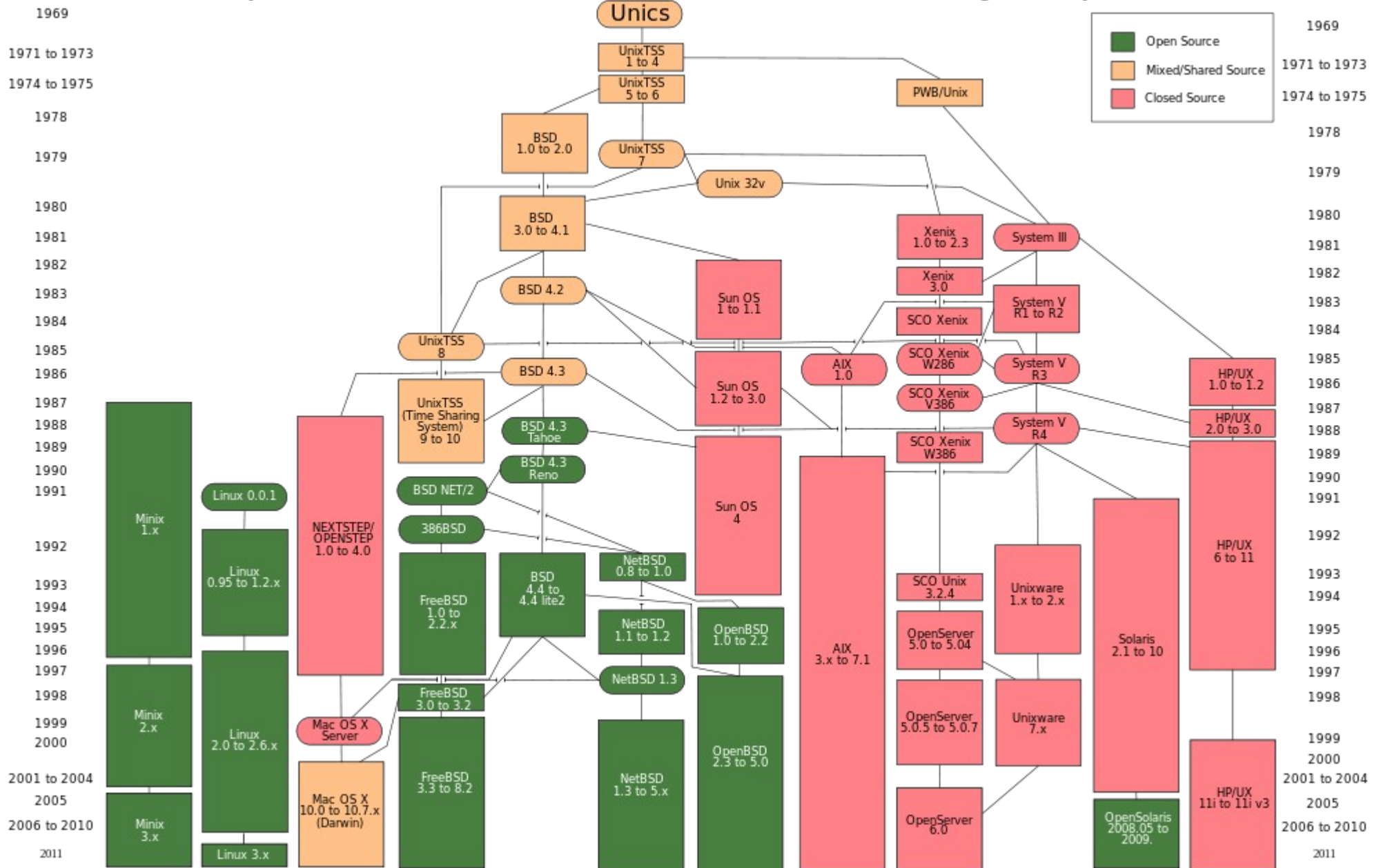


# Introduction to Linux Command Line Interface

# Family of Unix-like Operating Systems



# GNU/Linux and Distributions

- Linux kernel: the core of the operating system
- GNU/Linux: a free operating system using Linux kernel and supporting GNU software (compilers, editors, programming libraries, ...)
- Distributions: combine different applications with GNU/Linux operating system and release as a complete system
  - RedHat, Debian, Slackware
  - Ubuntu, OpenSUSE, Mint, Arch, DSL, Centos, ...
- Kernel also used in embedded systems: TVs, wireless routers, mobile devices (Android), ...

# Why Linux? Why Not MS Windows?

- Linux is in many networking and embedded products
  - Routers, modems, firewalls, TVs, portable devices
- Linux is well-suited to learning networking concepts
  - Simple, yet powerful operations for common network tasks
  - Implementing and running simple client/server applications is easy
  - Easy to run and configure a router and firewall
  - Free (and not pirated) software
- Useful to learn another system (most of you know Windows already)
- (Course coordinator uses it every day)

# Why is command line useful?

- **Flexibility**: often GUI has limits that command line equivalent does not
- **Reliability**: many command line programs have been used much longer than GUI counterparts
- **Speed**: few hardware (graphics) resources needed; can bypass delays of human user
- **Learning**: often command line programs give you 'closer' look at computer inner workings
- Examples:
  - **Scripting**: automate multiple tasks
  - **Diagnosis**: view detailed information about computer
  - **Networking**: interact with computers remotely