



The following list outlines the topics that might be included on the final exam. They are in no particular order; the fact that one topic precedes another does not mean it is more important than the other.

- operating system terminology: multi-tasking, multi-user, command line interpreter, shell, kernel
- authentication: logins and passwords
- self-help in UNIX: the man command and the man pages
- file systems and the file hierarchy:
  - file globs
  - special directories
  - home directory, working directory
  - structure of a directory
  - pathnames: absolute and relative
  - hidden files
  - measuring storage capacity
- the environment and environment variables
- files:
  - types of files
  - file properties
  - permissions and modes and what they mean
- binary numerals: converting to and from decimals, and adding binary numerals
- i/o redirection and pipes
- bash scripts:
  - reading, understanding, and writing them
  - command line arguments
  - input validation
- the many commands that were taught in class, including but not limited to:
- navigation, changing file permissions, copying, moving, and deleting files
- listing directory contents, listing file properties, including commands such as ls, more, less, file, type
- obtaining system information such as current users, past logins,
- filters and related topics, including:
- cat, head, tail, sed, tac, wc, cut, grep, sort, uniq, fold, awk
- pattern matching: regular expressions and extended regular expressions
- Perl
  - reading and understanding Perl code
  - determining the results of executing Perl code fragments