

- What is UNIX
- UNIX from users' point of view
 - Console interface
 - Interactive and batch processing
 - Shell
 - Files, directories, special files
- UNIX from programmers' point of view
 - Shell scripts
 - C API – introduction
- Internals of some UNIX systems (basics)
 - Boot process
 - Filesystem structure

(not a formal definition!)

- Manages all processes (programs) running on a machine
- Provides interfaces for programs to interact with hardware and other system components (syscalls)
- Provides user environment

- Define many system features like users, file access permissions, IPC interfaces
- Define functions for programmers to interact with OS
- Define set of basic programs

Some Unices, UNIX-like and UNIX-based systems

- (Open)Solaris
- *BSD
- Minix
- GNU/Linux

Somehow based on UNIX (UNIX-like) systems

- MacOS X
- iOS
- Android

Unix “family tree”

http://en.wikipedia.org/wiki/File:Unix_history-simple.svg

More detailed (still incomplete) variant <http://www.levenez.com/unix/>

Software licensing

- Proprietary software
- Freeware
- Open Source software
- Free software

Major free software licenses

GPL vs LGPL vs BSD

| | GPL | LGPL | BSD |
|---|---------------|---------------|------------------|
| Use a program free of charge | Yes | Yes | Yes |
| Modify the program ^{1 2} | Copyleft | Copyleft | Yes |
| Sell copies of original program | (a) | (a) | Yes |
| Dynamically link with a code with another license | No | Yes | Yes |
| Sell copies of modified program | Copyleft, (a) | Copyleft, (a) | Yes ¹ |
| Simple | No | No | Yes |

Copyleft requires to publish any modifications with free software license like a base code.

(a) Must provide source code free of charge.

¹It is required to retain original copyright notice

²Statically linking with a program is also considered modifying