notes for UNIX

The UNIX Time-Sharing System

**Mainpoints: clean abstractions for files/devices, process management**

\tip: portable: not requiring any special hardware support

simplicity, elegance, ease of use

have lots of local-written programs

## hardware and software environment

Softwares is written in C.

Slightly larger but easy-understanding and have the ability of share reentrant code.

## the file system

\tip: file is just the byte streaming, potable. e.g. rather than record, has some integrity.

Three kinds of files: ordinary disk files, directories and special files(device).

linking: a file exists independently of any directory entry.

\tip: e.g. like gmail’s “label”

hardlink points to the file, soft links point to the hard links; soft links are more secure.

mount system request

set-user-ID feature: the seventh bit

\tip: a kind of right amplification

I/O has different system calls such as open, create, seek

## implementation of the file system

i-index

## processes and images

image: computer execution environment

process: the execution of an image

fork system call to create child process

The communication of processes: pipes.

## the shell

command line interpreter

shell has standard input/output files

## traps

## perspective

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