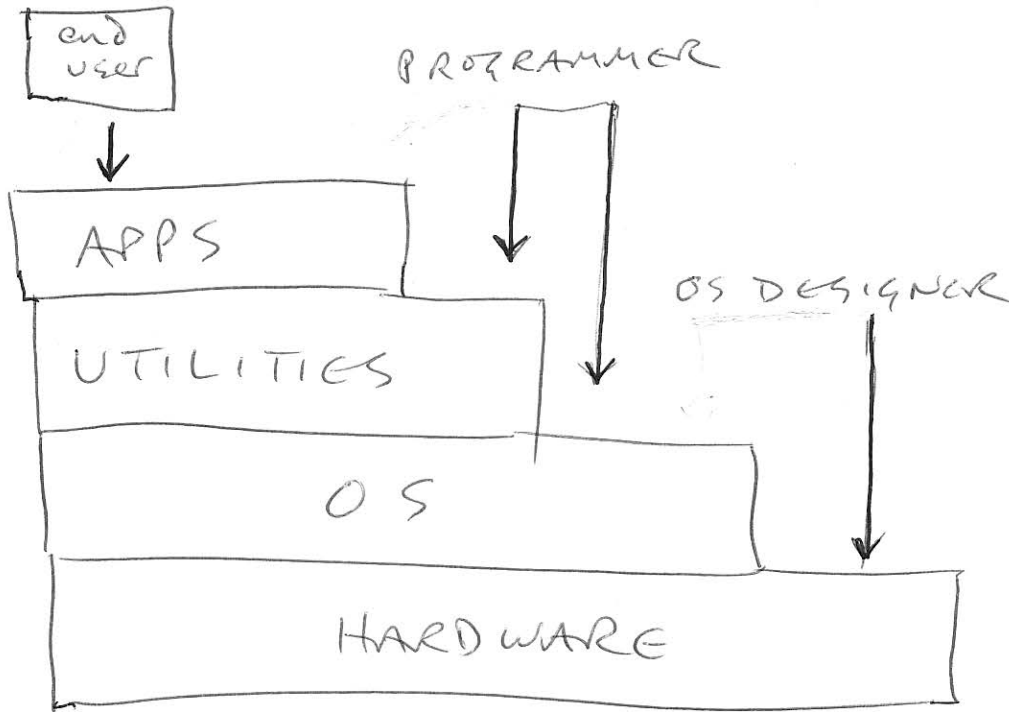


OPERATING SYSTEMS

- 2 MAIN - WINDOWS WIMP/GUI
- UNIX-LIKE COMMAND LINE

Hide complexity from programmers + users.

Windows often running 70 or so programs in the background before you add your own apps.



OS KERNEL SERVICES

MEMORY MANAGEMENT - Allocate available RAM to programs, manage virtual memory,

TASK MANAGEMENT - launch processes and maintain process list, timeslicing

FILE MANAGEMENT

open, read, write, close files; set + check permissions; buffering.

DEVICE MANAGEMENT

printers, scanners, cameras, VDU's, keyboard, mice

ESSENTIAL HARDWARE FEATURES

Memory protection for OS + to allow OS to protect apps from each other.

TIMER - to prevent one app monopolising CPU/RAM
PRIVILEGED instructions and interrupts

SCHEDULING

PROCESS

Program that is running, inc. code, data, resources, register state
context switching is the capture of the current state, saving and replacing it with the next app, before eventually switching back.

PCB Process Control Block

Identifier, state, volatile environment: prog. counter, memory pointers, context data
priority, I/O status, accounting info.