

Embedded Systems

11/13/13

Windows

iOS

LINUX

Android

DOS

MacOS X

Windows Embedded

Proprietary

Win River

Green Hills

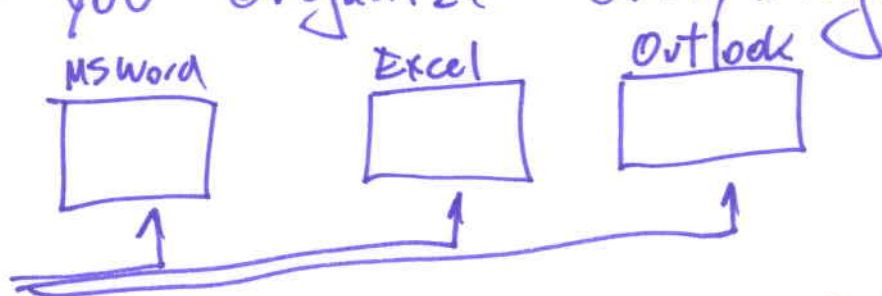
①

Why do you need an OS?

1) Write code to do low-level things (interfacing with hardware) takes a lot of time - in many cases, it has already been done. APIs

2) Coordinate the system resources (i.e. disk, memory, serial ports, LCD)

3) Embedded Systems are complex, OS can help you organize everything.



4) Run more than one application (multi-threading)

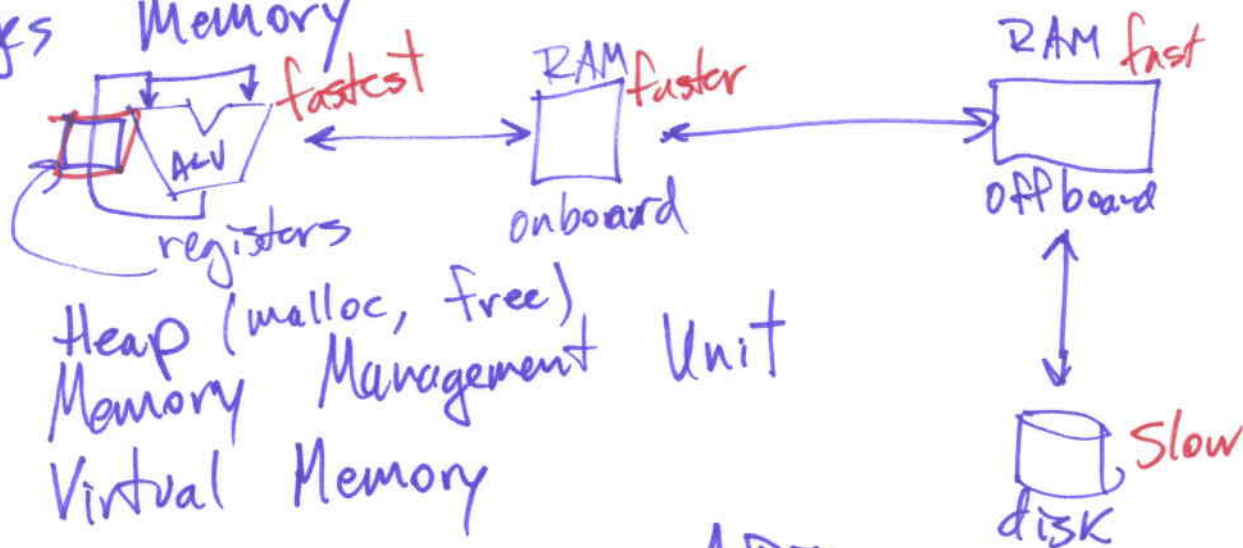
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What "tools" or applications come in a standard OS? ②

A) Manages the processor & all applications running concurrently

B) Manages Memory



C) Access to hardware via API (Consistent Interface)

D) File system Catalog, timestamp, access

E) Protection → preventing one app from destroying data of another app.

Simple OS

while (1) {
}

roll-your-own