



OPERATING SYSTEM DESIGN

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OS Structures & Kernel Programming

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OPERATING SYSTEMS DESIGN

What is common with all these people?



Bill Gates

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What is common with all these people?



Dennis Ritchie and Ken Thomson

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What is common with all these people?



Linus Torvalds



Steve Jobs

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What is common with all these people?



Andy Rubin

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Common OS for Desktops



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Common OS for Mobiles



Android



Bada

BlackBerry

BlackBerry
OS



iOS



MeeGo



Palm OS



Symbian



Windows
Mobile

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Common OS for Embedded Systems



VxWorks



FreeRTOS



Palm OS



MS-DOS



Linux



RTLinux

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Common OS for IoT Devices



MICROEJ



ARM'mbed

Contiki

NUCLEUS

android
things



OPERATING SYSTEMS DESIGN

Where OS is required?

- Computing Systems where **multiple applications** are to be **handled and proper functionalities** are to be done based on invoked application.
- System where multiple tasks and multiple users are to be handled

- OS is a program that acts as an **interface** between a user of a computer and the computer hardware
- **OS Goals:**
 - To **manage all the resources** in an efficient manner
 - **Execute user programs** and make solving user problems easier
 - Make the computer system **convenient** to use

- No universally accepted definition
- **OS is a resource allocator.** The software that manages all computer resources. Decides between conflicting requests for efficient and fair resource use
- **OS is a control program.** Controls execution of programs to prevent errors and improper use of the computer.
- “The one program running at all times on the computer” is the kernel. Everything else is either a system program or an application program



THANK YOU

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