# Types of Operating Systems

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# Types of Operating Systems

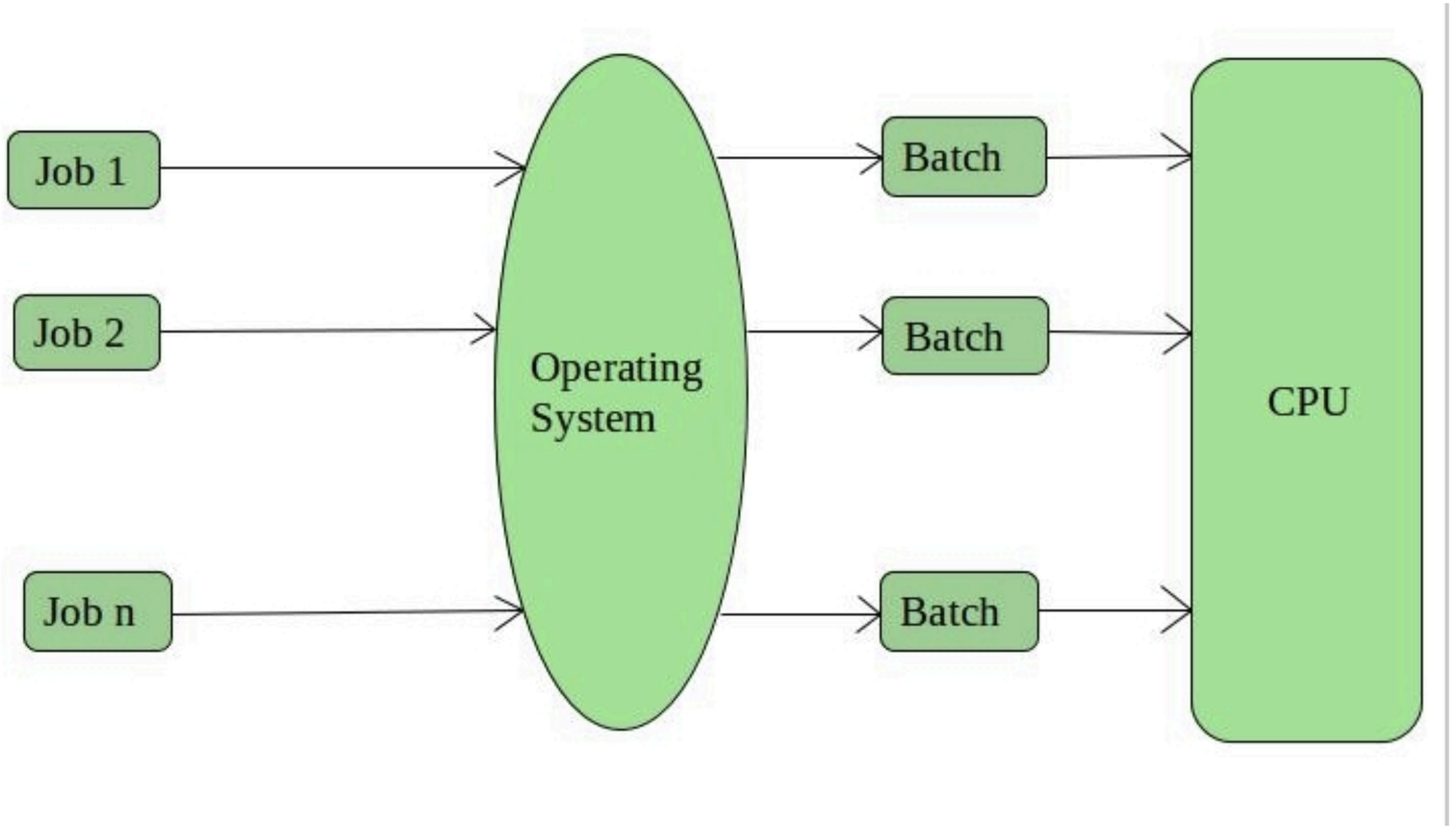
- Serial OS
- Batch OS
- Time Sharing OS
- Distributed OS
- Network OS
- Real Time OS

# Serial OS

- No operating system
- Machines run from a console with display lights, toggle switches, input device, and printer
- Schedule time
- Setup included loading the compiler, source program, saving compiled program, and loading and linking

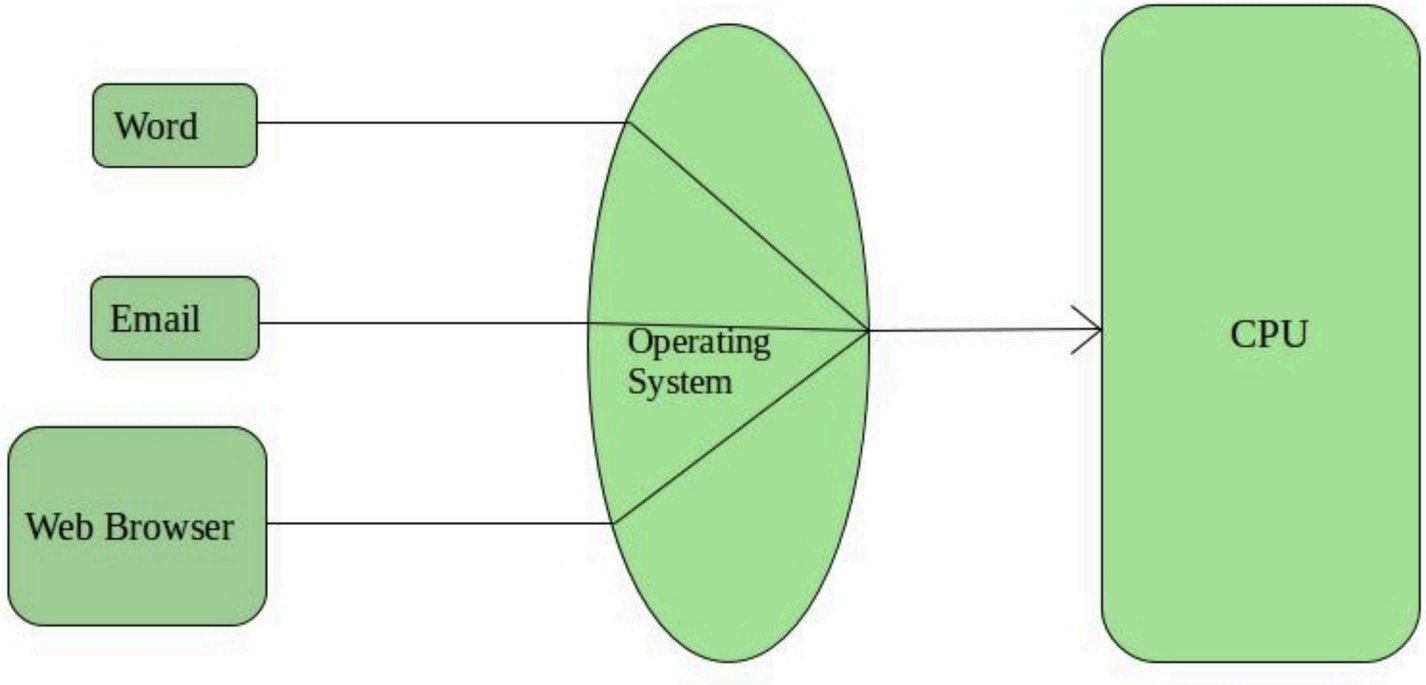
# Batch OS

- JOB MONITOR
- Batch jobs together – Job Control Language
- Program returns control to monitor when finished
- Memory protection: some memory areas are accessible only to the monitor
- Privileged mode instructions: only accessible to the monitor



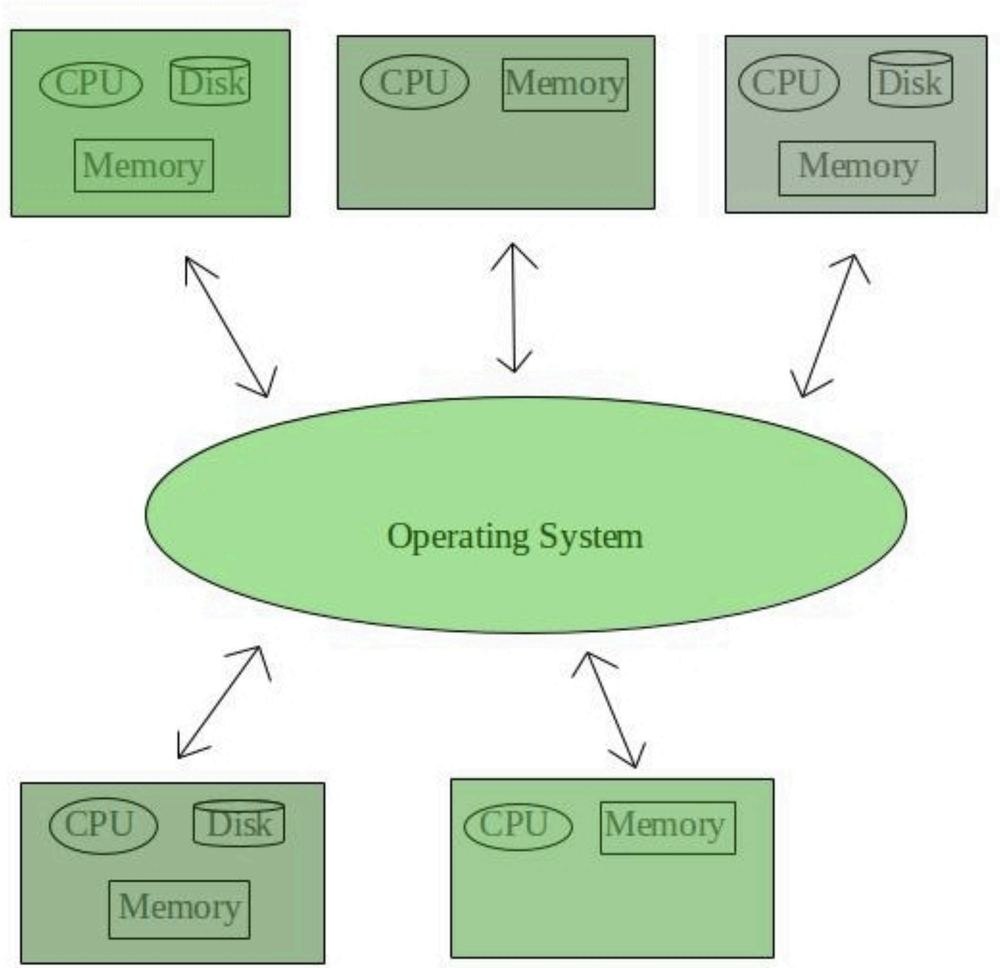
# Time Sharing OS

- Multitasking Systems.
- Single/Different Users
- Time Quantum
- Equal opportunity
- CPU idle time can be reduced
- Security and integrity of user programs and data



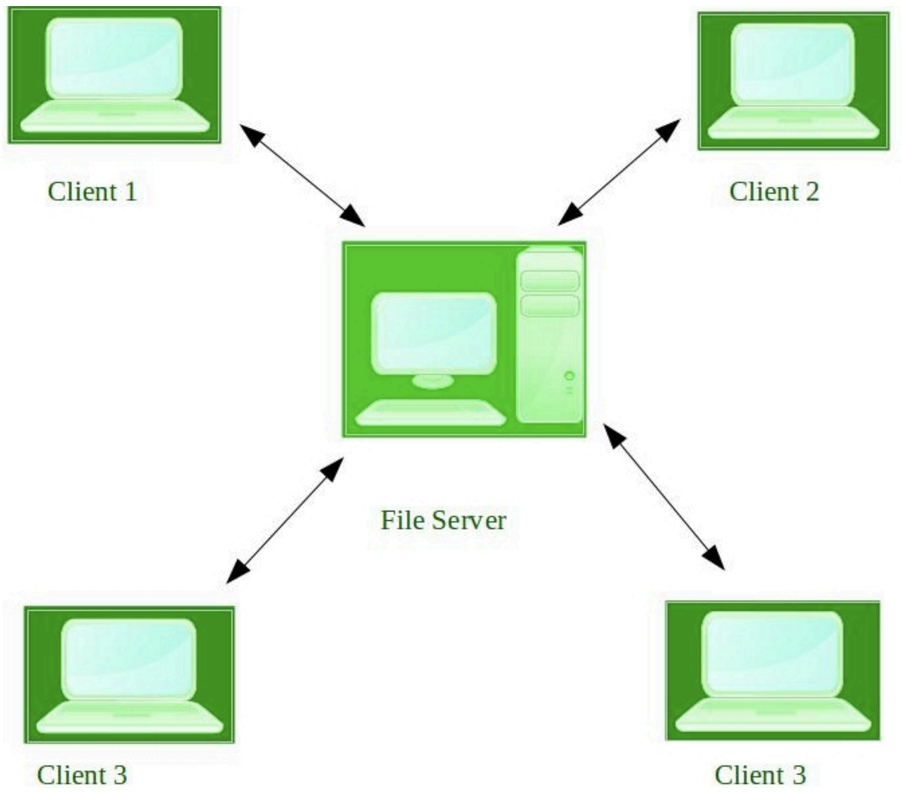
# Distributed OS

- Various autonomous interconnected computers
- Loosely coupled systems
- Failure of one will not affect the other
- Computation is highly fast and durable
- Load Distribution
- Scalable



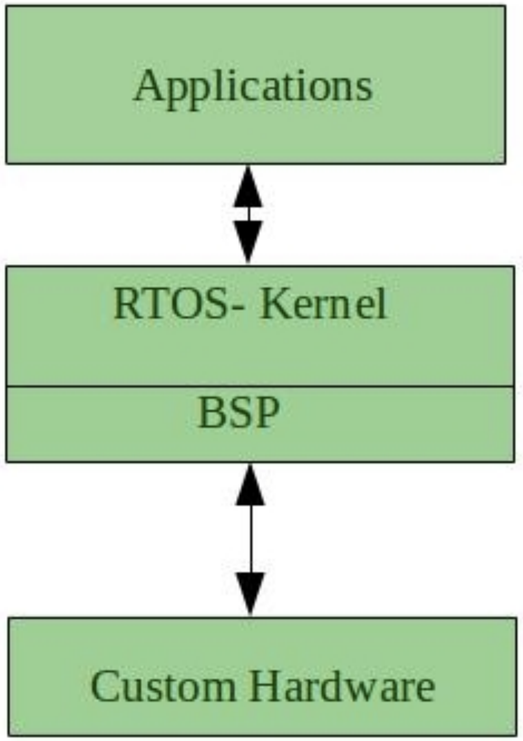
# Network OS

- Manage data, users, groups, security, applications
- Shared access of files, printers, security, applications
- Tightly coupled systems.
- New technologies and hardware up-gradation are easily integrated to the system

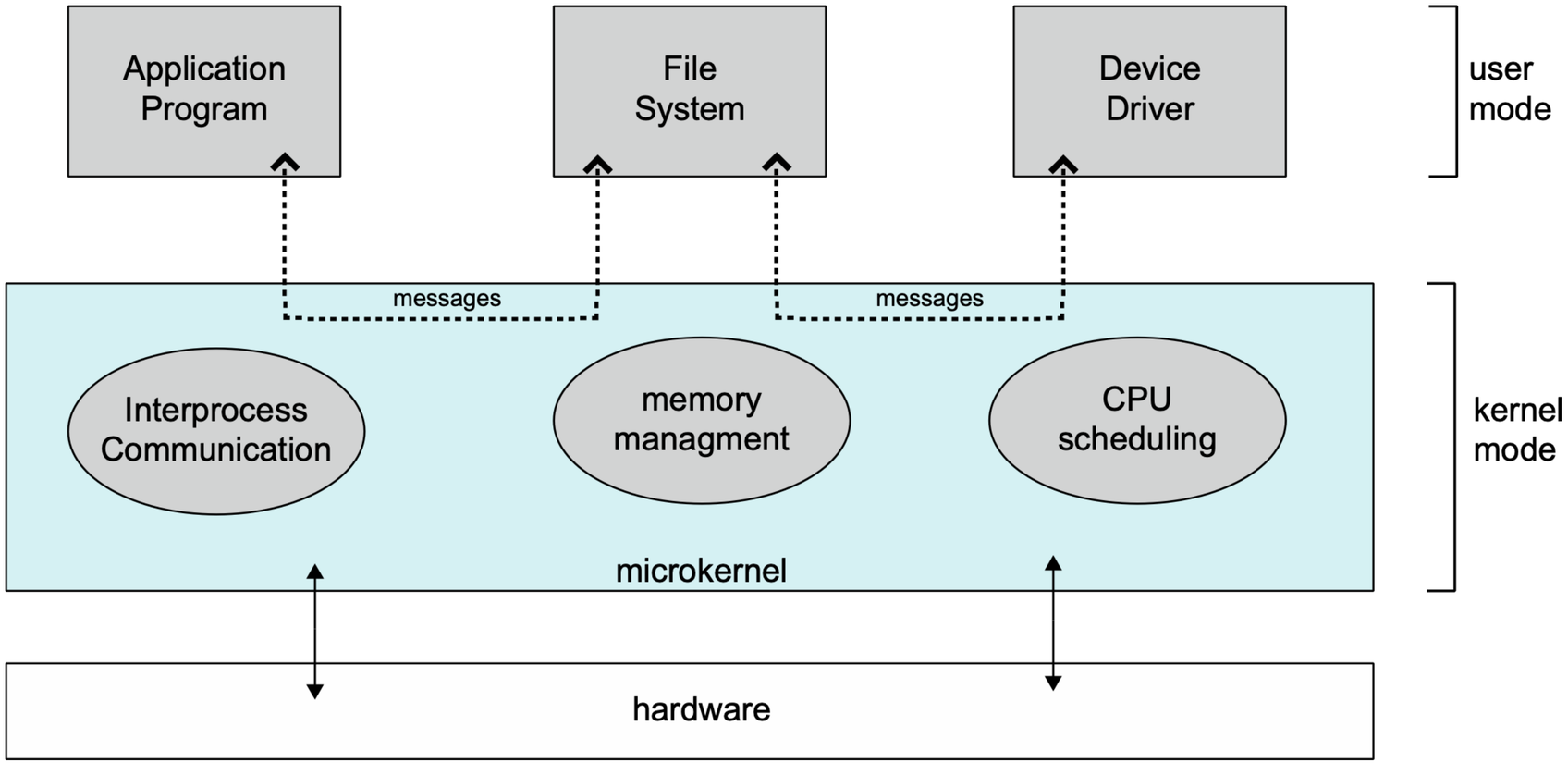


# Real Time OS

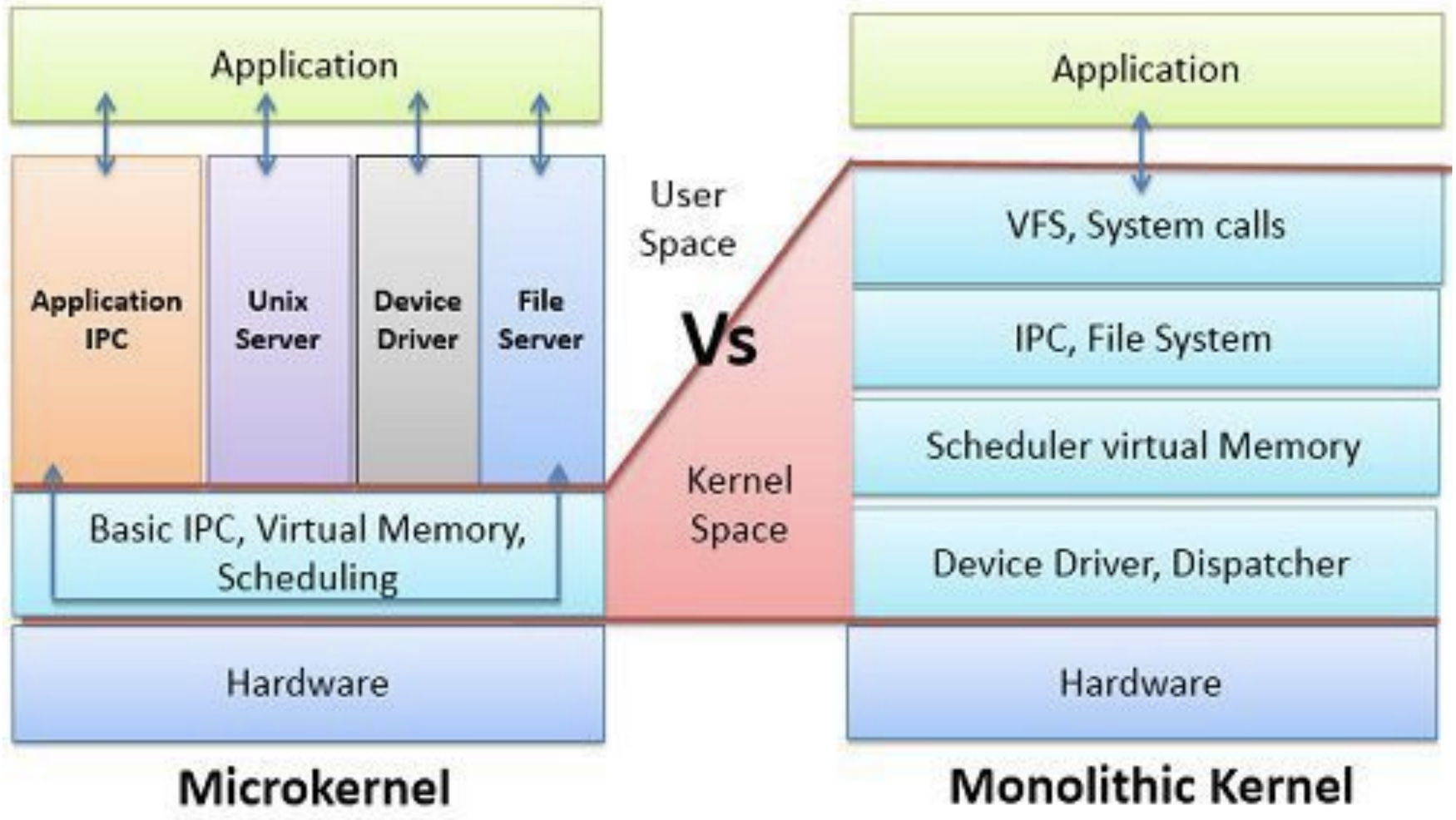
- Response Time: The time interval required to process and respond to inputs is very small.
- Uses: missile systems, air traffic control systems, robots etc.



# Microkernel



# Monolithic Kernel



# Modular Kernels

- Many modern operating systems implement loadable kernel modules
- Uses object-oriented approach
- Each core component is separate
- Each talks to the others over known interfaces
- Each is loadable as needed within the kernel

# Thank you …