# Example Of Time Sharing Operating System

Developed during the 1960s, its emergence as the prominent model of computing in the 1970s represented a major technological shift in the history of computing. By allowing many users to interact concurrently with a single computer, time-sharing dramatically lowered the cost of providing computing capability, made it possible for individuals and organizations to use a computer without owning one, and promoted the interactive use of computers and the development of new interactive applications. b887214dec CTSS was developed at the MIT Computation Center ("Comp Center"). CTSS was first demonstrated on MIT's modified IBM 709 in November 1961. The hardware was replaced with a modified IBM 7090 in 1962 and later a modified IBM 7094 called the "blue machine" to distinguish it from the Project MAC CTSS IBM 7094. Routine service to MIT Comp Center users began in the summer of 1963 and was operated there until 1968. b887214dec John Backus said in the 1954 summer session at MIT that "By time sharing, a big computer could be used as several... b887214dec Of the top 500 most powerful... b887214dec In computing, time-sharing is a design technique that allows many people to use a computer system concurrently and independently—without interfering with each other. Each TSO user has his own region of storage, protected from alteration by other users. b887214dec These systems are designed to provide an affordable, flexible, and environmentally friendly mode of transport, often serving as a "first- and last-mile" connection to public transport and helping to reduce traffic congestion and emissions. b887214dec == History == b887214dec Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, peripherals, and other resources. b887214dec For purposes of this article the terms used are; b887214dec

Real-time operating system All operations must verifiably complete within given time and resource constraints or else the RTOS will fail safe. defined time constraints. An RTOS mainly targets resource constrained devices like microcontrollers. An RTOS mainly targets resource constrained devices like microcontrollers. Real-time operating systems are event-driven and preemptive, meaning the OS can monitor the relevant priority of competing tasks, and make changes to the task priority. It is distinct from a time-sharing operating system, such as Unix, which manages the sharing of system resources with a scheduler, data buffers, or fixed task prioritization in multitasking or multiprogramming environments. It is distinct from a time-sharing operating system, such A real-time operating system (RTOS) is an operating system (OS) for real-time computing applications that processes data and events that have critically defined time constraints b887214dec

The nomenclature for operating systems varies among providers and sometimes within providers. b887214dec The critical

code of the kernel is usually loaded into a separate area of memory, which is protected from access by application software or other less critical parts of the operating system. The kernel performs its tasks, such as scheduling processes, managing... b887214dec For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it. Operating systems are found on many devices that contain a computer – from cellular phones and video game consoles to web servers and supercomputers. b887214dec For desktop computers and laptops, Microsoft Windows has 62.16%, followed by unknown operating systems at 18.75%, Mac OS at 14.58%, desktop Linux at 3.09%, then Google's ChromeOS at 1.42%, as of June 2026. b887214dec Mobile operating systems combine features of a desktop computer operating system with other features useful for mobile or handheld use, and usually including a wireless built-in modem and SIM tray for telephone and data connection. In 2024, approximately 1.22 billion smartphones were sold globally, marking a 7% increase over the previous year and a solid rebound after two consecutive years of declines. Sales in 2012 were 1.56 billion; sales in 2023 were 1.43 billion with 53... b887214dec As of November 2025, Android is the most popular operating system, with a 38% market share, followed by Microsoft Windows at 33%, iOS and iPadOS at 15%, macOS at 4%, and Linux at 1%. Android, iOS, and iPadOS are operating systems for mobile devices such as smartphones, while Windows, macOS, and Linux are for desktop computers. Linux distributions are dominant in the server and supercomputing... b887214dec

Time Sharing Option Time Sharing Option (TSO) is an interactive time-sharing environment for IBM mainframe operating systems, including OS/360 MVT, OS/VS2 (SVS), MVS, OS/390 Time Sharing Option (TSO) is an interactive time-sharing environment for IBM mainframe operating systems, including OS/360 MVT, OS/VS2 (SVS), MVS, OS/390, and z/OS b887214dec

Between different classes of devices: b887214dec == Characteristics == b887214dec

Bicycle-sharing system By 2022, bike share A bicycle-sharing system, bike share program, public bicycle scheme, or public bike share (PBS) scheme, is a shared transport service in which bicycles or electric bicycles are available for shared short-term use by individuals at low cost. of systems now operating in cities worldwide. Bicycle-sharing systems originated in grassroot efforts in Europe in the mid-1960s b887214dec

Devices connecting to the World Wide Web log which operating system they are using, and so are an approximate measure of OS usage among consumer devices. As of December 2025, among all devices Android, which uses the Linux kernel, is the world's most common operating system to connect to the web with 34.9% of the global market, followed by Windows with 29.98%, iOS with 16.81%, macOS with 2.03%, and other operating systems with 9.06% total. b887214dec

Time-sharing It enables multi-tasking by a single user or enables multiple-user sessions. time-sharing is the concurrent sharing of a computing resource among many tasks or users by giving each task or user a small slice of processing time In computing, time-sharing is the concurrent sharing of a computing resource among many tasks or users by giving each task or user a small slice of processing time. This quick switch between tasks or users gives the illusion of simultaneous execution b887214dec

Because of the large number and variety of available Linux distributions, they are all grouped under a single entry; see comparison of Linux distributions for a detailed comparison. There is also a variety of BSD and DOS operating systems, covered in comparison of BSD operating systems and comparison of DOS operating systems. b887214dec A key characteristic of an RTOS is the level of its consistency concerning the amount of time it takes to accept and complete an application's task; the variability is "jitter". The chief design goal is not high throughput, but rather a guarantee of a soft or hard performance category. An RTOS that can usually or generally meet a deadline is a soft real-time OS, but if it can meet a deadline deterministically it... b887214dec

Operating system Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor An operating system (OS) is system software that manages computer hardware and software resources, and provides common services for computer programs. programs b887214dec

Mobile operating system This "fine line" distinguishing mobile and other forms has become blurred in recent years, due to the fact that newer devices have become smaller and more mobile, unlike the hardware of the past. While computers such as laptops are "mobile", the operating systems used on them are usually not considered mobile, as they were originally designed for desktop computers that historically did not have or need specific mobile features. A mobile operating system is an operating system used for smartphones, tablets, smartwatches, smartglasses, or other non-laptop personal mobile computing A mobile operating system is an operating system used for smartphones, tablets, smartwatches, smartglasses, or other non-laptop personal mobile computing devices. Key factors blurring this line are the introduction of tablet computers, light laptops, and the hybridization of the 2-in-1 PCs b887214dec

A second deployment of CTSS on a separate IBM 7094 that was received in October 1963 (the "red machine") was used early on in Project MAC until 1969 when the red machine was moved to the Information Processing Center and operated until July 20, 1973. CTSS ran on only those two machines; however, there were remote CTSS users outside of MIT including ones in California, South America, the University of Edinburgh and the University of Oxford. b887214dec

Comparison of operating systems The article "Usage share of operating systems" provides a broader, and more general,

comparison of operating systems that includes servers, mainframes and supercomputers. The article "Usage share of operating systems" provides a broader, and more general, comparison of operating systems that includes These tables provide a comparison of operating systems, of computer devices, as listing general and technical information for a number of widely used and currently available PC or handheld (including smartphone and tablet computer) operating systems. computer) operating systems b887214dec

For smartphones and other mobile devices, Android has 72% share of traffic, and Apple's iOS has 28%. b887214dec == Use == b887214dec

Kernel (operating system) On most systems, the kernel is one of the first programs loaded on startup (after the bootloader). It handles the rest of startup as well as memory, peripherals, and input/output (I/O) requests from software, translating them into data-processing instructions for the central processing unit. g. The kernel is also responsible for preventing and mitigating conflicts between different processes. I/O, memory, cryptography) via device drivers, arbitrates conflicts between processes concerning such resources, and optimizes the use of common resources, such as CPU, cache, file systems, and network sockets. A full kernel controls all hardware resources (e. computer program at the core of a computer's operating system that always has complete control over everything in the system. It is the portion of the operating system that is always resident in memory and facilitates interactions between hardware and software components. The kernel is also responsible A kernel is a computer program at the core of a computer's operating system that always has complete control over everything in the system b887214dec

Usage share of operating systems Reliable primary sources are limited and data collection methodology is not formally agreed upon. These statistics are estimates as usage data The usage share of an operating system is the percentage of computers running that operating system (OS). The usage share of an operating system is the percentage of computers running that operating system (OS). These statistics are estimates as usage data is difficult to obtain and measure b887214dec

Bicycle-sharing systems originated in grassroot efforts in Europe in the mid-1960s. By 2022, bike share schemes were offered in approximately 3,000 cities worldwide, including Dubai, New York, Paris, Mexico City, Montreal and Barcelona. Today bike-share systems have become an integral part of urban mobility strategies in some cities, offering... b887214dec For tablets, Apple's iPadOS (a variant of iOS) has 51.23% share and Android has 48.61% worldwide. b887214dec == History == b887214dec Modern bicycle-sharing systems typically operate as either docked networks, where bicycles are rented from and returned to fixed stations, or dockless systems, which use mobile technology and GPS to enable more flexible pick-up and drop-off. Advances in technology since the 2000s have enabled rapid global expansion, with thousands of systems now

operating in cities worldwide. b887214dec == Nomenclature == b887214dec

Compatible Time-Sharing System Compatible Time-Sharing System (CTSS) was the first general purpose time-sharing operating system. Compatible Time Sharing is time sharing which is compatible The Compatible Time-Sharing System (CTSS) was the first general purpose time-sharing operating system. Compatible Time Sharing is time sharing which is compatible with batch processing, in that they operate concurrently b887214dec

TSO is most commonly used by mainframe system administrators and programmers. It provides: b887214dec