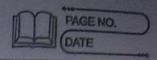


7) Briefly explain the steps involved in invocation of system cell. - when a program in user made requires access to RAM on a handware resource, it must ask the Kennal to provide access to that resource. This is done via something called a system call. - The system call constitutes at three parameters, file name, pointer to the buffer and member of bytes to read The function call looks like, Count = read (fd, beffer, nbytes) The count consist of total number of lites to read I't and 3rd parameters are passed by value and 2nd is by reference i.e. buffere address. - Now Controlis transferred to the read procedure + At this stuge the parameters are pushed onto the stuck - Then the system call member is put into the Register of TRAP instruction is executed that switches forom User made to kernal made - Now the system call number is examined and they the dispatcher dispatches to the Currect system call handler via table of pointers to the system call handler. of After that the system call handler works. - After the system call handler completes its turk the Control may be suturned to the user-space liberary procedure - Then the Control is transferred to the user program from the read procedure Finally SP is incremented to clean up the stack In this way the Job of read System call is Completed



8) Compare Unix and windows interface to use process.

Linux is free and open source openating system where as avindow is a commercial operating system whose source Code is inacessible

Window is not customizable as against Linux is Customizable and a user Can modify the Code and Can change its the look and feel.

Linux provides high security them windows because

- Windows must boot from the primary partition.

In Contrast, there is no such constraint in Linux it can be booted from weither primary on logical partition.

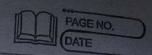
The separation of the directories is done using a backslash ('Y') in windows. On the contrary, in Linux there are separated by using forward slash.

In linux, file mames are case sensitive while windows file name are case-insensitive while linux uses the monolithic kennel which consumes more running space whereas windows uses the microkennel which takes less space but system running efficiency is lower than I mux.

Debout is difference between system call and Library Functions

The library functions are portable which means an application using standard library function will nun on all systems, while on the other hand an application relying on the corresponding system call interface may vary from system to system

/ larex



- mallocl) is library function call that further uses the bake on sbake system call for memory allocation - A library function is worked to the user program and executes in user space while a system Coul is not linked to a user program and executes in ternal space - A library function execution time is counted in user level time while a system call execution time is counted as a part of system time - Liberary functions can be debugged easily using a debugger while system calls cannot be debugged as They are executed by the kernel. 10.) "OPerating system as an extended machine" Justify. ) Users do not count to be involved in the programming of storage devices. - moneover, operating system provides a simple, high level abstraction such that these devices contum a collection of marned files. - Such files consist of the 4seful piece of intermedia like a digital photo, email message on web pages. -loss provides a set of basic commands for rand, write, save, close. - Also, Dealing with them to is easier than directly

dealing with hardware - Thus, operating system hides the complexity of hardware and presents a beautiful interfuce

to users.

- Just as the o.s. shields the programmer from the disk handware and presents a simple file uniented interface, it also conceals a lot of unpleasant business Concerning interrupts, timers, mumory management.

