

Windows Interview Questions And Answers Guide.



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Windows Job Interview Preparation Guide.

Question # 1

In services, right click, properties (services.msc)
in this give me the details about the general, logon .. etc details?

Answer:-

No Answer is Posted For this Question

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Question # 2

What is the Difference between Windows 2003 standard Enterprise, Premium, Data center and Web Edition?

Answer:-

WEB EDITION:

To position windows server 2003 more competitively against other web servers, Microsoft has released a stripped-down-yet-impressive edition of windows server 2003 designed specially for web services. the feature set and licensing allows customers easy deployment of web pages, web sites, web applications and web services.

Web Edition supports 2GB of RAM and a two-way symmetric multiprocessor(SMP). It provides unlimited anonymous web connections but only 10 inbound server message block(SMB) connections, which should be more than enough for content publishing. The server cannot be an internet gateway, DHCP or fax server. Although you can remotely administer the server with Remote Desktop, the server can not be a terminal

server in the traditional sense. The server can belong to a domain, but cannot be a domain controller. The included version of the microsoft SQL server database Engine can support as many as 25 concurrent connections.

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Question # 3

How do you recover an object in Active Directory, which is accidentally deleted by you, with no backup?

Answer:-

Using ntdsutil.exe command,we can restored the AD objects.

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Question # 4

What is the Logical / Physical Structures of the AD Environment?

Answer:-

physical structure:

Forest, Site, Domain, DC

logical structure:

Schema partition, configuration partition, domain

partition and application partition

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Question # 5

How to change the windows xp product key if wrongly installed with other product key but you have original product key? What you will do to Make your os as Genuine?

Answer:-

Some third party software are available for this function or reinstall this system

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Question # 6

If 512mb Ram is there what will be the minimum and maximum Virtual memory for the system?

**Answer:-**

To work out the total virtual memory (page file) required for windows XP you should take the amount of ram in the system and + 25% (512MB + 25% (128MB) = 640MB total virtual memory. by setting both the min and max to 640MB you can increase the performances of the operating system.

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Question # 7

Ntldr.exe is missing in win xp os what will you do?

Answer:-

Boot from windows xp cd and go to recovery console mode

give the administrator password

c:windows>

prompt will come

come out from windows with the help of command

c:windows>cd ..

c:>

go to cd prompt d:

d:>cd i386

d:i386>copy ntldr c: enter

d:i386>copy ntdetect.com c: enter

restart u r computer

problem fix

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Question # 8

What is LDAP?

Answer:-

LDAP, Lightweight Directory Access Protocol, is an Internet protocol that email and other programs use to look up information from a server.

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Question # 9

What is the SYSVOL folder?

Answer:-

The Sysvol folder on a Windows domain controller is used to replicate file-based data among domain controllers. Because junctions are used within the Sysvol folder structure, Windows NT file system (NTFS) version 5.0 is required on domain controllers throughout a Windows distributed file system (DFS) forest.

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Question # 10

What are application partitions? When do we use them?

Answer:-

Application Directory Partition is a partition space in Active Directory which an application can use to store that application specific data. This partition is then replicated only to some specific domain controllers.

The application directory partition can contain any type of data except security principles (users, computers, groups).

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Question # 11

What is the KCC?

Answer:-

With in a Site, a Windows server 2003 service known as the KCC automatically generates a topology for replication among the domain controllers in the domain using a ring structure. The Kcc is a built in process that runs on all domain controllers.

The KCC analyzes the replication topology within a site every 15 minute to ensure that it still works. If you add or remove a domain controller from the network or a site, the KCC reconfigures the topology to reflect the change.

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Question # 12

What is tombstone lifetime attribute?

Answer:-

The number of days before a deleted object is removed from the directory services. This assists in removing objects from replicated servers and preventing restores from reintroducing a deleted object. This value is in the Directory Service object in the configuration NIC by default 2000 (60 days)

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Question # 13

How do we Backup Active Directory?

Answer:-

Backing up Active Directory is essential to maintain an Active Directory database. You can back up Active Directory by using the Graphical User Interface (GUI) and command-line tools that the Windows Server 2003 family provides.



You frequently backup the system state data on domain controllers so that you can restore the most current data. By establishing a regular backup schedule, you have a better chance of recovering data when necessary.

To ensure a good backup includes at least the system state data and contents of the system disk, you must be aware of the tombstone lifetime. By default, the tombstone is 60 days. Any backup older than 60 days is not a good backup. Plan to backup at least two domain controllers in each domain, one of at least one backup to enable an authoritative restore of the data when necessary.

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Question # 14

How do we restore AD?

Answer:-

You can't restore Active Directory (AD) to a domain controller (DC) while the Directory Service (DS) is running. To restore AD, perform the following steps. Reboot the computer.

The computer will boot into a special safe mode and won't start the DS. Be aware that during this time the machine won't act as a DC and won't perform functions such as authentication.

1. Start NT Backup.
2. Select the Restore tab.
3. Select the backup media, and select System State.
4. Click Start Restore.
5. Click OK in the confirmation dialog box.

After you restore the backup, reboot the computer and start in normal mode to use the restored information. The computer might hang after the restore completes; I've experienced a 30-minute wait on some machines.

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Question # 15

What are GPOs?

Answer:-

Group Policy gives you administrative control over users and computers in your network. By using Group Policy, you can define the state of a user's work environment once, and then rely on Windows Server 2003 to continually force the Group Policy settings that you apply across an entire organization or to specific groups of users and computers.

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Question # 16

What is the order in which GPOs are applied?

Answer:-

Group Policy settings are processed in the following order:

- 1:- Local Group Policy object-each computer has exactly one Group Policy object that is stored locally. This processes for both computer and user Group Policy processing.
- 2:- Site-Any GPOs that have been linked to the site that the computer belongs to are processed next. Processing is in the order that is specified by the administrator, on the Linked Group Policy Objects tab for the site in Group Policy Management Console (GPMC). The GPO with the lowest link order is processed last, and therefore has the highest precedence.
- 3:- Domain-processing of multiple domain-linked GPOs is in the order specified by the administrator, on the Linked Group Policy Objects tab for the domain in GPMC. The GPO with the lowest link order is processed last, and therefore has the highest precedence.
- 4:- Organizational units-GPOs that are linked to the organizational unit that is highest in the Active Directory hierarchy are processed first, then GPOs that are linked to its child organizational unit, and so on. Finally, the GPOs that are linked to the organizational unit that contains the user or computer are processed.

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Question # 17

Name a few benefits of using GPMC?

Answer:-

Microsoft released the Group Policy Management Console (GPMC) years ago, which is an amazing innovation in Group Policy management. The tool provides control over Group Policy in the following manner:

- * Easy administration of all GPOs across the entire Active Directory Forest
- * View of all GPOs in one single list
- * Reporting of GPO settings, security, filters, delegation, etc.
- * Control of GPO inheritance with Block Inheritance, Enforce, and Security Filtering
- * Delegation model
- * Backup and restore of GPOs
- * Migration of GPOs across different domains and forests

With all of these benefits, there are still negatives in using the GPMC alone. Granted, the GPMC is needed and should be used by everyone for what it is ideal for. However, it does fall a bit short when you want to protect the GPOs from the following:

- * Role based delegation of GPO management
- * Being edited in production, potentially causing damage to desktops and servers
- * Forgetting to back up a GPO after it has been modified
- * Change management of each modification to every GPO

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Question # 18

What are the GPC and the GPT? Where can I find them?

Answer:-

GPOs store group policy settings in two locations: a Group Policy container (GPC) (preferred) and a Group Policy template (GPT). The GPC is an Active Directory object that stores version information, status information, and other policy information (for example, application objects).



The GPT is used for file-based data and stores software policy, script, and deployment information. The GPT is located on the system volume folder of the domain controller. A GPO can be associated with one or more Active Directory containers, such as a site, domain, or organizational unit. Multiple containers can be associated with the same GPO, and a single container can have more than one associated GPO.

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Question # 19

What are GPO links? What special things can I do to them?

Answer:-

To apply the settings of a GPO to the users and computers of a domain, site, or OU, you need to add a link to that GPO. You can add one or more GPO links to each domain, site, or OU by using GPMC. Keep in mind that creating and linking GPOs is a sensitive privilege that should be delegated only to administrators who are trusted and understand Group Policy.

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Question # 20

What are administrative templates?

Answer:-

The GPO settings is divided between the Computer settings and the User settings. In both parts of the GPO you can clearly see a large section called Administrative Templates.

Administrative Templates are a large repository of registry-based changes (in fact, over 1300 individual settings) that can be found in any GPO on Windows 2000, Windows XP, and Windows Server 2003.

By using the Administrative Template sections of the GPO you can deploy modifications to machine (called HKEY_LOCAL_MACHINE in the registry) and user (called HKEY_CURRENT_USER in the registry) portions of the Registry of computers that are influenced by the GPO.

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Question # 21

Name the AD NCs and replication issues for each NC?

Answer:-

Name the AD NCs and replication issues for each NC

*Schema NC, *Configuration NC, * Domain NC

Schema NC This NC is replicated to every other domain controller in the forest. It contains information about the Active Directory schema, which in turn defines the different object classes and attributes within Active Directory.

Configuration NC Also replicated to every other DC in the forest, this NC contains forest-wide configuration information pertaining to the physical layout of Active Directory, as well as information about display specifiers and forest-wide Active Directory quotas.

Domain NC This NC is replicated to every other DC within a single Active Directory domain. This is the NC that contains the most commonly-accessed Active Directory data: the actual users, groups, computers, and other objects that reside within a particular Active Directory domain.

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Question # 22

What is MUTEX?

Answer:-

A mutual exclusion object, or MUTEX, is an object created for use in computer programs. The essential function of MUTEX is to make it possible for a multiple program thread to make use of a single resource. Generally, the functionality of mutual exclusion objects is to allow this use of a single resource by creating an environment where the access to the resource is continually passed back and forth between the various aspects of the program.

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Question # 23

What is the difference between a computer process and thread?

Answer:-

A single process can have multiple threads that share global data and address space with other threads running in the same process, and therefore can operate on the same data set easily. Processes do not share address space and a different mechanism must be used if they are to share data.

If we consider running a word processing program to be a process, then the auto-save and spell check features that occur in the background are different threads of that process which are all operating on the same data set (your document).

process:

In computing, a process is an instance of a computer program that is being sequentially executed[1] by a computer system that has the ability to run several computer programs concurrently.

Thread:

A single process may contain several executable programs (threads) that work together as a coherent whole. One thread might, for example, handle error signals, another might send a message about the error to the user, while a third thread is executing the actual task of the...

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Question # 24

What is INODE?

Answer:-

INODE is a pointer to a block on the disk and it is unique.

Inode is a unique number. Inode holds metadata of files.

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Question # 25



Explain the working of Virtual Memory?

Answer:-

Virtual memory like as a temporary storage area. It consists of page table. In this pages are divided into frames. It is a continuous memory allocation. It is also called logical memory.

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Question # 26

How does Windows NT supports Multitasking?

Answer:-

Preemptive multitask

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Question # 27

What is Semaphore?

Answer:-

A hardware or software flag.

In multitasking systems, a semaphore is a variable with a value that indicates the status of a common resource.

Its used to lock the resource that is being used.

A process needing the resource checks the semaphore to determine the resource's status and then decides how to proceed.

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Question # 28

Recovery from Deadlock?

Answer:-

Process Termination:

->Abort all deadlocked processes.

->Abort one process at a time until the deadlock cycle is eliminated.

->In which order should we choose to abort?

Priority of the process.

How long process has computed, and how much longer to completion.

Resources the process has used.

Resources process needs to complete.

How many processes will need to be terminated?

Is process interactive or batch?

Resource Preemption:

->Selecting a victim ? minimize cost.

->Rollback ? return to some safe state, restart process for that state.

->Starvation ? same process may always be picked as victim, include number of rollback in cost factor.

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Question # 29

What is multi tasking, multi programming, multi threading?

Answer:-

Multi programming:

Multiprogramming is the technique of running several programs at a time using timesharing.

It allows a computer to do several things at the same time. Multiprogramming creates logical parallelism.

The concept of multiprogramming is that the operating system keeps several jobs in memory simultaneously. The operating system selects a job from the job pool and starts executing a job, when that job needs to wait for any i/o operations the CPU is switched to another job. So the main idea here is that the CPU is never idle.

Multi tasking:

Multitasking is the logical extension of multiprogramming. The concept of multitasking is quite similar to multiprogramming but difference is that the switching between jobs occurs so frequently that the users can interact with each program while it is running. This concept is also known as time-sharing systems. A time-shared operating system uses CPU scheduling and multiprogramming to provide each user with a small portion of time-shared system.

Multi threading:

An application typically is implemented as a separate process with several threads of control. In some situations a single application may be required to perform several similar tasks for example a web server accepts client requests for web pages, images, sound, and so forth.

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Question # 30

Differentiate between RAM and ROM?

Answer:-

Semiconductor memories are of two types: RAM (random access memory) and ROM (read only memory).

RAM is a read/write memory. Information can be written into and read from a RAM. It is volatile memory.

It stores information so long as power supply is on.

ROM is permanent type memory. Its contents are not lost when power supply goes off. the user cannot write into a ROM. Its contents are decided by the manufacturer and written at the time of manufacture. Programmable ROMs are also available. They are called PROMs.

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Question # 31



Binding of Instructions and Data to Memory?

Answer:-

Address binding of instructions and data to memory addresses can happen at three different stages

Compile time: If memory location known a priori, absolute code can be generated; must recompile code if starting location changes.

Load time: Must generate relocatable code if memory location is not known at compile time.

Execution time: Binding delayed until run time if the process can be moved during its execution from one memory segment to another. Need hardware support for address maps (e.g., base and limit registers).

Multistep Processing of a User Program

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Question # 32

Why paging is used?

Answer:-

Paging is solution to external fragmentation problem which is to permit the logical address space of a process to be noncontiguous, thus allowing a process to be allocating physical memory wherever the latter is available.

[Read More Answers.](#)

Question # 33

What is a Safe State and its use in deadlock avoidance?

Answer:-

When a process requests an available resource, system must decide if immediate allocation leaves the system in a safe state

->System is in safe state if there exists a safe sequence of all processes.

->Sequence $\langle P_1, P_2, \dots, P_n \rangle$ is safe if for each P_i , the resources that P_i can still request can be satisfied by currently available resources + resources held by all the P_j , with $j < i$.

If P_i resource needs are not immediately available, then P_i can wait until all P_j have finished.

When P_j is finished, P_i can obtain needed resources, execute, return allocated resources, and terminate.

When P_i terminates, P_{i+1} can obtain its needed resources, and so on.

->Deadlock Avoidance ?ensure that a system will never enter an unsafe state.

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Question # 34

Explain the difference between microkernel and macro kernel?

Answer:-

Micro-Kernel: A micro-kernel is a minimal operating system that performs only the essential functions of an operating system. All other operating system functions are performed by system processes.

Monolithic: A monolithic operating system is one where all operating system code is in a single executable image and all operating system code runs in system mode.

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Question # 35

Differentiate between Compiler and Interpreter?

Answer:-

An interpreter reads one instruction at a time and carries out the actions implied by that instruction. It does not perform any translation. But a compiler translates the entire instructions.

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Question # 36

What is the relation between process system time, process waiting time, and process CPU time?

Answer:-

Process system time (turn around time) = process cpu time + process waiting time

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Question # 37

Condition for deadlock occurrence?

Answer:-

Deadlock can arise if four conditions hold simultaneously.

Mutual exclusion:

only one process at a time can use a resource.

Hold and wait:

a process holding at least one resource is waiting to acquire additional resources held by other processes.

No preemption:

a resource can be released only voluntarily by the process holding it, after that process has completed its task.

Circular wait:

there exists a set $\{P_0, P_1, \dots, P_{n-1}\}$ of waiting processes such that P_0 is waiting for a resource that is held by P_1 , P_1 is waiting for a resource that is held by P_2 , P_2 is waiting for a resource that is held by P_3 , P_3 is waiting for a resource that is held by P_4 , P_4 is waiting for a resource that is held by P_5 , P_5 is waiting for a resource that is held by P_6 , P_6 is waiting for a resource that is held by P_7 , P_7 is waiting for a resource that is held by P_8 , P_8 is waiting for a resource that is held by P_9 , P_9 is waiting for a resource that is held by P_{10} , P_{10} is waiting for a resource that is held by P_{11} , P_{11} is waiting for a resource that is held by P_{12} , P_{12} is waiting for a resource that is held by P_{13} , P_{13} is waiting for a resource that is held by P_{14} , P_{14} is waiting for a resource that is held by P_{15} , P_{15} is waiting for a resource that is held by P_{16} , P_{16} is waiting for a resource that is held by P_{17} , P_{17} is waiting for a resource that is held by P_{18} , P_{18} is waiting for a resource that is held by P_{19} , P_{19} is waiting for a resource that is held by P_0 .

P_0 is waiting for a resource that is held by P_1 , P_1 is waiting for a resource that is held by P_2 , P_2 is waiting for a resource that is held by P_3 , P_3 is waiting for a resource that is held by P_4 , P_4 is waiting for a resource that is held by P_5 , P_5 is waiting for a resource that is held by P_6 , P_6 is waiting for a resource that is held by P_7 , P_7 is waiting for a resource that is held by P_8 , P_8 is waiting for a resource that is held by P_9 , P_9 is waiting for a resource that is held by P_{10} , P_{10} is waiting for a resource that is held by P_{11} , P_{11} is waiting for a resource that is held by P_{12} , P_{12} is waiting for a resource that is held by P_{13} , P_{13} is waiting for a resource that is held by P_{14} , P_{14} is waiting for a resource that is held by P_{15} , P_{15} is waiting for a resource that is held by P_{16} , P_{16} is waiting for a resource that is held by P_{17} , P_{17} is waiting for a resource that is held by P_{18} , P_{18} is waiting for a resource that is held by P_{19} , P_{19} is waiting for a resource that is held by P_0 .

P_n , and P_0 is waiting for a resource that is held by P_0 .

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Question # 38

Compare Linux credit based algorithm with other scheduling algorithms?

Answer:-

For the conventional time shared processes, Linux uses a prioritized, credit-based algorithm. Each process possesses a certain number of scheduling credits; when a new task must be chosen to run, the process with most credits is selected. Every time that a timer interrupt occurs, the currently running process loses one credit; when its credits reaches zero, it is suspended and another process is chosen. If no runnable processes have any credits, then Linux performs a recrediting operation, adding credits to every process in the system (rather than just to the runnable ones), according to the following rule:

$Credits = credits/2 + priority$

The above scheduling class is used for time-shared process and the in Linux for the real-time scheduling is simpler it uses scheduling classes: first come, first served (FCFS), and round-robin (RR). In both cases, each process has a priority in addition to its scheduling class. In time-sharing scheduling, however, processes of different priorities can still compete with one another to some extent; in real-time scheduling, the scheduler always runs the process with the highest priority. Among processes of

equal priority, it runs the process that has been waiting longest. The only difference between FCFS and RR scheduling is that FCFS processes continue to run until they either exit or block, whereas a round-robin process will be preempted after a while and will be moved to the end of the scheduling queue.

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Question # 39

Why thread is called as a lightweight process?

Answer:-

It is called light weight process to emphasize the fact that a thread is like a process but is more efficient and uses fewer resources(n hence "lighter")and they also share the address space.

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Question # 40

What is the cause of thrashing? How does the system detect thrashing? Once it detects thrashing, what can the system do to eliminate this problem?

Answer:-

Thrashing is caused by under allocation of the minimum number of pages required by a process, forcing it to continuously page fault. The system can detect thrashing by evaluating the level of CPU utilization as compared to the level of multiprogramming. It can be eliminated by reducing the level of multiprogramming.

[Read More Answers.](#)

Question # 41

Define Demand Paging, Page fault interrupt, and Trashing?

Answer:-

Demand Paging: Demand paging is the paging policy that a page is not read into memory until it is requested, that is, until there is a page fault on the page.

Page fault interrupt: A page fault interrupt occurs when a memory reference is made to a page that is not in memory. The present bit in the page table entry will be found to be off by the virtual memory hardware and it will signal an interrupt.

Trashing: The problem of many page faults occurring in a short time, called page thrashing

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Question # 42

Give a non-computer example of preemptive and non-preemptive scheduling?

Answer:-

Consider any system where people use some kind of resources and compete for them. The non-computer examples for preemptive scheduling the traffic on the single lane road if there is emergency or there is an ambulance on the road the other vehicles give path to the vehicles that are in need. The example for preemptive scheduling is

people standing in queue for tickets.

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Question # 43

What is starvation and aging?

Answer:-

Starvation:

Starvation is a resource management problem where a process does not get the resources it needs for a long time because the resources are being allocated to other processes.

Aging:

Aging is a technique to avoid starvation in a scheduling system. It works by adding an aging factor to the priority of each request. The aging factor must increase the request's priority as time passes and must ensure that a request will eventually be the highest priority request (after it has waited long enough)

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Question # 44

If a system has 128 MB RAM and 1 GB hard Disk, and a process decides to use its fully allotted Virtual Memory $2^{32} - 2GB = 2GB$, how is it practically possible?. But this works in all machines. How?

Answer:-

Virtual memory is double of RAM.As per question RAM is 128MB.so virtual memory is 256MB.

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Question # 45

Difference between Logical and Physical Address Space?

Answer:-

The concept of a logical address space that is bound to a separate physical address space is central to proper memory management.

Logical address generated by the CPU; also referred to as virtual address.

Physical address address seen by the memory unit.

Logical and physical addresses are the same in compile-time and load-time address-binding schemes; logical (virtual) and physical addresses differ in execution-time address-binding scheme

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Question # 46

Describe the actions taken by thread library to context switch between user level threads?

Answer:-

The thread library function performs the following actions to context switch between user level threads Copy all live registers to Thread control Block (TCB) Restore the state of the thread to run next i.e (copy the values of live registers from (TCB) to registers) Move to the next thread to execute

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Question # 47

Explain briefly about, processor, assembler, compiler, loader, linker and the functions executed by them?

Answer:-

Processor:

A processor is the part a computer system that executes instructions .It is also called a CPU

Assembler:

An assembler is a program that takes basic computer instructions and converts them into a pattern of bits that the computer's processor can use to perform its basic operations. Some people call these instructions assembler language and others use the term assembly language.

Compiler:

A compiler is a special program that processes statements written in a particular programming language and turns them into machine language or "code" that a computer's processor uses. Typically, a programmer writes language statements in a language such as Pascal or C one line at a time using an editor. The file that is created contains what are called the source statements. The programmer then runs the appropriate language compiler, specifying the name of the file that contains the source statements.

Loader:

In a computer operating system, a loader is a component that locates a given program (which can be an application or, in some cases, part of the operating system itself) in offline storage (such as a hard disk), loads it into main storage (in a personal computer, it's called random access memory), and gives that program control of the compute

Linker:

Linker performs the linking of libraries with the object code to make the object code into an executable machine code.

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Question # 48

Explain Segmentation with paging?

Answer:-

Segments can be of different lengths, so it is harder to find a place for a segment in memory than a page. With segmented virtual memory, we get the benefits of virtual memory but we still have to do dynamic storage allocation of physical memory. In order to avoid this, it is possible to combine segmentation and paging into a two-level

virtual memory system. Each segment descriptor points to page table for that segment.This give some of the advantages of paging (easy placement) with some of the advantages of segments (logical division of the program).

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Question # 49

What are the major differences between windows XP and Windows 2000 operating systems?

Answer:-

Both Windows XP and 2000 come in different flavors like for XP u have Home,professional and Enterprise Edition.

With 2000 u have professional,Server/s as it professional is more like client pc in Client server Architecture can also be used for development environment XP home for rather general purpose users or say newbies with minimal configuration.

With 2000 server you have all the server capabilities plus on default u might have NTFS system rather than FAT or FAT32. pluse with server u have capabilities of hosting services like DHCP, DNS, TERMINAL SERVICES etc..

There would be a lot if i start explaining in detail but for a creamy part...this is more than enough

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Question # 50

What is the difference between Hard and Soft real-time systems?

Answer:-

A hard real-time system guarantees that critical tasks complete on time. This goal requires that all delays in the system be bounded from the retrieval of the stored data to the time that it takes the operating system to finish any request made of it. A soft real time system where a critical real-time task gets priority over other tasks and retains that priority until it completes. As in hard real time systems kernel delays need to be bounded

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Question # 51



Why are page sizes always powers of 2?

Answer:-

Recall that paging is implemented by breaking up an address into a page and offset number. It is most efficient to break the address into X page bits and Y offset bits, rather than perform arithmetic on the address to calculate the page number and offset. Because each bit position represents a power of 2, splitting an address between bits results in a page size that is a power of 2.

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Question # 52

On a system with paging, a process cannot access memory that it does not own why? How could the operating system allow access to other memory? Why should it or should it not?

Answer:-

An address on a paging system is a logical page number and an offset. The physical page is found by searching a table based on the logical page number to produce a physical page number. Because the operating system controls the contents of this table, it can limit a process to accessing only those physical pages allocated to the process. There is no way for a process to refer to a page it does not own because the page will not be in the page table. To allow such access, an operating system simply needs to allow entries for non-process memory to be added to the process's page table. This is useful when two or more processes need to exchange data; they just read and write to the same physical addresses (which may be at varying logical addresses). This makes for very efficient interprocess communication.

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Question # 53

What is active directory? How it works?

What is dns? How it works?

What is dhcp? How it works?

What is ias? How it works?

Answer:-

Active is a centralize directory database it's provide single point of administration

what is DHCP

dynamic host configuration protocol

it is one of the network service which is provides the ip address dynamically to the DHCP client

it give ip address automatically to the client

WHAT IS DNS

do mine naming service

it provide ip to host and host to ip

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Question # 54

What is the main component of operating system?

Answer:-

Main component of operating system are kernel and shell.

Shell is a interface between application program and kernel whenever application program wants some work to be done It contacts kernel and kernel inturn perform work with the help of device drivers .thus we can say kernel is an interface between hardware and shell.

Kernel uses device drivers to control microcontroller card of peripheral device and inturn work is being accomplished.

application program -> [shells ->kernel ->device driver -> controller card -> physical hardware]

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Question # 55

What are Dynamic Loading, Dynamic Linking and Overlays?

Answer:-

Dynamic Loading:

* Routine is not loaded until it is called

* Better memory-space utilization; unused routine is never loaded.

* Useful when large amounts of code are needed to handle infrequently occurring cases.

* No special support from the operating system is required implemented through program design.

Dynamic Linking:

* Linking postponed until execution time.

* Small piece of code, stub, used to locate the appropriate memory-resident library routine.

* Stub replaces itself with the address of the routine, and executes the routine.

* Operating system needed to check if routine is in processes? memory address.

* Dynamic linking is particularly useful for libraries.

Overlays:

* Keep in memory only those instructions and data that are needed at any given time.

* Needed when process is larger than amount of memory allocated to it.

* Implemented by user, no special support needed from operating system, programming design of overlay structure is complex.

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Question # 56

What is Dispatcher?

Answer:-

Dispatcher module gives control of the CPU to the process selected by the short-term scheduler; this involves:

Switching context

Switching to user mode



Jumping to the proper location in the user program to restart that program
Dispatch latency ? time it takes for the dispatcher to stop one process and start another running.

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Question # 57

What is the difference between unix and windows?

Answer:-

Unix and Windows use completely different paradigms for run-time loading of code. Before you try to build a module that can be dynamically loaded, be aware of how your system works.

In Unix, a shared object (.so) file contains code to be used by the program, and also the names of functions and data that it expects to find in the program. When the file is joined to the program, all references to those functions and data in the file's code are changed to point to the actual locations in the program where the functions and data are placed in memory. This is basically a link operation.

In Windows, a dynamic-link library (.dll) file has no dangling references. Instead, an access to functions or data goes through a lookup table. So the DLL code does not have to be fixed up at runtime to refer to the program's memory; instead, the code already uses the DLL's lookup table, and the lookup table is modified at runtime to point to the functions and data.

In Unix, there is only one type of library file (.a) which contains code from several object files (.o). During the link step to create a shared object file (.so), the linker may find that it doesn't know where an identifier is defined. The linker will look for it in the object files in the libraries; if it finds it, it will include all the code from that object file.

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Question # 58

What is Context Switch?

Answer:-

Switching the CPU to another process requires saving the state of the old process and loading the saved state for the new process. This task is known as a context switch. Context-switch time is pure overhead, because the system does no useful work while switching. Its speed varies from machine to machine, depending on the memory

speed, the number of registers which must be copied, the existed of special instructions(such as a single instruction to load or store all registers).

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Question # 59

What are different tasks of Lexical Analysis?

Answer:-

The purpose of the lexical analyzer is to partition the input text, delivering a sequence of comments and basic symbols. Comments are character sequences to be ignored, while basic symbols are character sequences that correspond to terminal symbols of the grammar defining the phrase structure of the input

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Question # 60

Deadlock Detection-Algorithm Usage?

Answer:-

* When, and how often, to invoke depends on:

How often a deadlock is likely to occur?

How many processes will need to be rolled back?

* If detection algorithm is invoked arbitrarily, there may be many cycles in the resource graph and so we would not be able to tell which of the many deadlocked processes ?caused? the deadlock.

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Question # 61

Common Functions of Interrupts?

Answer:-

* Interrupt transfers control to the interrupt service routine generally, through the interrupt vector, which contains the addresses of all the service routines.

* Interrupt architecture must save the address of the interrupted instruction.

* Incoming interrupts are disabled while another interrupt is being processed to prevent a lost interrupt.

* A trap is a software-generated interrupt caused either by an error or a user request.

* An operating system is interrupt driven.

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Question # 62

Distributed Systems?

Answer:-

Distribute the computation among several physical processors.

Loosely coupled system each processor has its own local memory; processors communicate with one another through various communications lines, such as high-speed

buses or telephone lines

Advantages of distributed systems:

* Resources Sharing

* Computation speed up load sharing

* Reliability

* Communications



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Question # 63

While running DOS on a PC, which command would be used to duplicate the entire diskette?

Answer:-

diskcopy
Java Thread States

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Question # 64

What is CPU Scheduler?

Answer:-

* Selects from among the processes in memory that are ready to execute, and allocates the CPU to one of them.

* CPU scheduling decisions may take place when a process:

- 1.Switches from running to waiting state.
- 2.Switches from running to ready state.
- 3.Switches from waiting to ready.
- 4.Terminates.

* Scheduling under 1 and 4 is nonpreemptive.

* All other scheduling is preemptive.

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Question # 65

What do you mean by deadlock?

Answer:-

Deadlock is a situation where a group of processes are all blocked and none of them can become unblocked until one of the other becomes unblocked. The simplest deadlock is two processes each of which is waiting for a message from the other.

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Question # 66

Give an example of microkernel?

Answer:-

- * Amoeba
- * WinNT
- * Minix

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Question # 67

What is the difference between a process and a task?

Answer:-

TASK :

A Particular Work to be Done is known as TASK

PROCESS :

one or more PROCESS will be required to complete a task.

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Question # 68

Describe different job scheduling in operating systems?

Answer:-

Scheduling is the activity of the deciding when process will receive the resources they request.

FCFS:

FCFS stands for First Come First Served. In FCFS the job that has been waiting the longest is served next.

Round Robin Scheduling:

Round Robin scheduling is a scheduling method where each process gets a small quantity of time to run and then it is preempted and the next process gets to run. This is called time-sharing and gives the effect of all the processes running at the same time

Shortest Job First:

The Shortest job First scheduling algorithm is a nonpreemptive scheduling algorithm that chooses the job that will execute the shortest amount of time.

Priority Scheduling:

Priority scheduling is a scheduling method where at all times the highest priority process is assigned the resource.

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Question # 69

Difference between Primary storage and secondary storage?

Answer:-

Main memory:

only large storage media that the CPU can access directly.



Secondary storage:
extension of main memory that provides large nonvolatile storage capacity.

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Question # 70

Explain the difference between microkernel and macro kernel?

Answer:-

Micro-Kernel:

A micro-kernel is a minimal operating system that performs only the essential functions of an operating system. All other operating system functions are performed by system processes.

Monolithic:

A monolithic operating system is one where all operating system code is in a single executable image and all operating system code runs in system mode.

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Question # 71

I have deleted a file from recycle bin but i want to use that file how can i restore that file? I have already used system restore for the same but the file could not be restore?

Answer:-

There is two solutions:

1. Restore from last back.
2. User Recycler folder. Start-->RUN-->type c:recycler --> type FTYPE

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Question # 72

What is a Real-Time System?

Answer:-

A real time process is a process that must respond to the events within a certain time period. A real time operating system is an operating system that can run real time processes successfully

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Question # 73

What is the important aspect of a real-time system or Mission Critical Systems?

Answer:-

A real time operating system has well defined fixed time constraints. Process must be done within the defined constraints or the system will fail. An example is the operating system for a flight control computer or an advanced jet airplane. Often used as a control device in a dedicated application such as controlling scientific experiments, medical imaging systems, industrial control systems, and some display systems. Real-Time systems may be either hard or soft real-time.

Hard real-time:

Secondary storage limited or absent, data stored in short term memory, or read-only memory (ROM) Conflicts with time-sharing systems, not supported by general-purpose operating systems.

Soft real-time:

- * Limited utility in industrial control of robotics
- * Useful in applications (multimedia, virtual reality) requiring advanced operating-system features.

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Question # 74

What are the difference phases of software development or software life cycle?

Answer:-

Specification of the task

Design of algorithms

Implementation (coding)

Testing and debugging

Maintenance and evolution of the system

Obsolescence

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Question # 75

What are the main difference between Micro-Controller and Micro- Processor?

Answer:-

A microcontroller is by definition a computer on a chip. It includes all the necessary parts (including the memory) all in one IC. You just need to apply the power (and possibly clock signal) to that device and it starts executing the program programmed to it. A microcontroller generally has the main CPU core, ROM/EPROM/EEPROM/FLASH, RAM and some necessary functions (like timers and I/O controllers) all integrated into one chip. The original idea behind the microcontroller was to limit the capabilities of the CPU itself, allowing a complete computer (memory, I/O, interrupts, etc) to fit on the available silicon real estate.

Microcontrollers are typically used where processing power isn't so important. More important are generally compact construction, small size, low power consumption and that those chips are cheap. For example controlling a microwave oven is easily accomplished with the smallest of microcontrollers. There is countless number of small

electronic devices which are nowadays based on microcontroller. A modern home can include easily tens or hundreds of microcontrollers, as almost every modern device which has electronics have a microcontroller (or more than one) inside.

Microprocessor is generally just the CPU core itself, although nowadays it might have some accessory parts also integrated to the same chip



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Question # 76

What is the state of the processor, when a process is waiting for some event to occur?

Answer:-

Waiting state

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