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* Versions and Features of Windows XP and 2000
  + Windows XP (Home Edition and Pro)
    - New user interface with new look and feel
    - Ability to simultaneously log on two or more users
    - Windows Media Player and Windows Messenger
    - Windows Security Center (with Service Pack 2)
    - User-friendly CD burning process
    - Remote Assistance and expanded Help
  + Windows XP Professional offers additional features
    - Example: support new higher-performance CPU’s
  + Two systems built on Windows XP Professional
    - Windows XP Media Center Edition
    - Windows XP Table PC Edition
  + Windows XP Professional x64 Edition
    - Used with 64-bit processors such as Intel Itanium
  + Windows 2000 includes four operating systems:
    - Windows 2000 Professional
    - Windows 2000 Server
    - Windows 2000 Advanced Server
    - Windows 2000 Datacenter Server
* Windows 2000/XP Architecture and Operating Modes
  + Two operating modes used:
    - User mode
      * Several subsystems that interact with users/programs
      * All applications relate to the OS via Win32 subsystem
        + Each DOS application runs on its own NTVDM
        + 16-bit Windows 3.X apps run in a WOW environment
        + 32-bit applications interact directly with the OS (protected)
      * Process: running program or group of programs
      * Thread: single task that process requests from kernel
      * A process can spawn multiple threads
* Networking Features
  + Workgroup: logical group of computers and users
    - Resources are shared within a workgroup
    - Administration is decentralized
  + Workgroup users a peer-to-peer networking model
  + Domain: group of networked computers
    - Resources are controlled via a centralized directory
  + A domain uses a client/server networking model
    - Networking operating system (NOS) controls directory
    - Some NOSs: Windows Server 2003, Novel Netware
  + Windows 2000/XP Logon
    - Administrator account
      * Has rights and permissions to all computer resources
      * Used to set up other user accounts and assign privileges
    - Logon is required before OS can be used
    - Rights and permissions granted according to user group
    - Windows XP allows multiple users to be logged on
    - To logoff or switch to another user, press Ctrl-Alt-Del
    - Log Off Windows dialog box appears
* How Windows 2000/XP Manages Hard Drives
  + Hard drive organization: partition, logical drive, sector
  + Steps involved in logically organizing a drive
    - Cylinders on the drive are divided into partitions
      * Partition table defines where partition begins and ends
    - Partitions are divided into logical drives; e.g., C, D, E
      * Creating first two levels is called partitioning the drives
    - Each logical drive is formatted with a file system
      * Some file systems used: FAT16, FAT32, or NTFS
  + Master Boot Record (MBR) or master boot sector
    - Contains master boot program and the partition table
  + Actions performed by master boot program at POST:
    - 2 partitions per drive
    - Max of 4 partitions
    - Integrity of partition table is checked
    - Primary Drive: Store operating system
    - Other Drive: Storage
    - Active (system) partition is located
    - OS boot program in active partition is executed
    - Massive boot anything is MAJOR; anything that attacks the hard drive is a malicious virus
      * Attacks the master boot program
  + Types of partitions in Windows 2000/XP
    - Primary: has only one logical drive, such as C
    - Extended: can have multiple logical drives; e.g., D, E
  + Up to four partitions allowed in Windows 2000/XP
    - The active partition is always a primary partition
    - There can only be one extended partition
  + System partition: active partition with OS boot record
  + Boot partition: store Windows 2000/XP OS
  + System and boot partitions are usually the same
  + Each logical drive is formatted with a file system
  + FAT16
    - Wasted space in cluster(s)
    - 16 bit cluster entries
    - DOS and Windows 95
  + FAT32
    - Used with Windows 98 OS
    - 32 bit entries
  + NTFS
    - Used in Windows 2000, XP, and beyond
    - File compression/encryption abilities
    - Recoverable file system
    - Supports encryption and disk quotas
    - Supports the larger drives
  + Advantages of Windows XP over 2000
    - Greater stability
    - Easier installation
    - Increased security
    - Better driver support
  + When to retain Windows 2000
    - The OS was included with a notebook