Concept paper



Information Discuss Input, Processing, Output Devices Identify the basic components of CPU Types of Software and Software Piracy Types of Operating System Computer Concepts BASICS Computer Systems Just about all computers, regardless of size, take raw data and change it into information The procedure involves input, processing, output, and storage (IPSO) Input, output, and processing devices grouped together represent a computer yester 3 System Components The PC system case houses the main system components The motherboard, mounts into the case, and is a circuit board that contains many integral components. The central processing unit memory basic controllers expansion ports and slots System Components (continued) Motherboard 5 The processor (CAP') is the brains of the computer Some manufacturers now offer: 6 Is housed on a tiny silicon chip Chip contains millions of switches that control the flow of electricity Dualcore processor (2 separate processors) Multi-core processor (more than 2 processors) The arithmetic/logic unit (ALL') performs arithmetic computations and logical operations The control unit is the boss, so to speak, and coordinates all of the processor's activities Uses programming instructions controls flow of information through the processor Random Access Memory: Short-term memory in Random Access Memory (RAM) on motherboard When computer is turned off whatever is on RAM is disappears For long-term use hard disk drive or USB drive RAM chips 8 Random Access Memory (continued): Process used by RAM is I-cycle and E-cycle which creates a machine cycle 9 Memory: Read-only memory (ROOM) Basic Controllers 10 Also found on motherboard and throughout Contains specific information for computer Instructions remain even when power is off Device that controls the transfer of data to peripheral devices, such as printers and

monitors Ports and Connectors: A port is an interface with a peripheral device USB port can connect up to 127 different peripherals with one connector Replacing serial and parallel ports in computer Firework is a newer type of external bus 11 Serial devices transfer data 1 bit at a time Parallel devices transfer at 8 bits (1 byte) at a time

Also known as IEEE 1394 and IEEE Bibb Traditional, Firmware, and USB ports 12 13 Ports and Connectors (continued): CICS (pronounced skuzzy) is a standard interface for connecting peripherals such as disk drives and printers Radar is a wireless standard using infrared light Bluetooth uses radio waves and provides short-range data and voice communication 14 Ports and Connectors (continued): Expansion slots are openings on the motherboard where an expansion board can be inserted Data Representation Computers communicate using a binary system of Xi's and Co's Standardized coding for all computers: 5 Most popular: ASCII which is the American Standard Code for Information Interchange Another type: BICEP which is the Extended Binary Coded Decimal Interchange Code Computer Software 16 Application software and system software are the two basic types of software. Windows is an example of an operating system, and Word and Excel are examples of application software. An icon is a small image that represents a file, command, or another computer function.

Most software has a graphical user interface (GU', pronounced "gooey'). Input Devices 17 Input devices enable you to input data and nomads into the computer The keyboard is the most commonly used input device for entering numeric and alphabetic data into a computer A wide variety of keyboards are available: ergonomic, wireless, specialized, security, and flexible Input

Devices (continued) 18 A pointing device is an input device that allows a user to position the pointer on the screen The mouse is the most commonly used pointing device for personal computers Optical Mouse The trackball is a pointing device that works like a mouse turned upside down; the ball is on top of the device.