COMPUTER

SOFTWARE

HARDWARE

MONITOR, SYSTEM UNIT, MOTHERBOARD, MOUSE, KEYBOARD, DESKTOP COMPUTER, LAPTOP, TABLET, SMARTPHONE, GRAPHICS CARD, RAM , NON VOLATILE, VOLATILE,

MOTHERBOARD – CPU SOCKET, RAM SLOT, 24PIN ATX, 4 PIN ATX, PCIE SLOT ,GRAPHICS CARD , SATA SLOT, FRONT PANNEL CONNECTORS, BACK PANEL CONNECTORS , CMOS BATTERY, INTERGRATED CHIPSET ..

BACK PANEL – PS2, VGA, HDMI, USB PORT, ETHERNET PORT, AUDIO PORT (LINE IN LINE OUT MIC)…

SYSTEM SPECS- CPU, RAM, STORAGE, GRAPHICS CARD, MOTHERBOARD, MONITOR

HARD DISK SPECS RAM SPECS

* STORAGE CAPACITY - STORAGE CAPACITY
* HDD TYPE - RAM TYPE
* TRANSFER RATE - DATA TRANSFER
* CONNECTIVITY - BUS CLOCK (MGHZ)
* PRICE - PRICE

MONITOR SPECS GRAPHICS CARD SLOT

* SCREEN SIZE - MEMORY
* RESOLUTION - MEMORY SPEED
* DISPLAY TYPE - INTERFACE WIDTH
* ASPECT RATIO - DISPLAY RESOLUTION
* COLOR SUPPORT - DISPLAY CONNECTORS
* INTERFACE - PRICE
* PRICE

MOTHERBOARD SPECS

* CPU SUPPORT - MEMORY
* OS SUPPORT
* CHIPSET
* DISPLAY
* EXPANSION
* STORAGE
* LAN
* AUDIO
* FORM FACTOR
* PRICE
* USB PORT

SYSTEM DESIGN

CAD/CAM AND GRAPHIC DESIGN WORKSTATIONS – MANUFACUTRING PLANTS BY ENGINEERS ETC.

* POWERFUL MULTI-CORE PROCESSOR
* SSD STORAGE
* MAX SYSTEM RAM
* HIGH-END VIDEO CARDS
* QUALITY MOUSE AND KEYBOARD

GAMING PCS – GAMERS SET THEIR OWN PC, BUT SOME COMPANY ARE BUILDING GAMING PCS

* POWERFUL MULTI-CORE PROCESSOR
* SSD STORAGE
* MAX SYSTEM RAM
* HIGH-END VIDEO CARDS
* HIGH-END COOLING SYSTEM
* HD SOUND CARD AND MICROPHONE

AUDIO/VIDEO EDTING WORKSTATIONS - MANIPULATE SOUND/AUDIO. NEEDS A LOT OF STORAGE AND RAM

* POWERFUL MULTI-CORE PROCESSOR
* SSD STORAGE
* MAX SYSTEM RAM
* HIGH-END VIDEO CARDS
* DUAL MOITOR
* HD SOUND CARD AND MICROPHONE

HOME SERVERS - USED TO STORE DATA, FUNCTION AS A WEB SERVER, AND MANAGE BACKUP OF OTHER COMPUTERS

* NAS
* MULTIPLE HARD DRIVES AND PROCESSOR
* 1 GB/S CONNECTION
* SERVER APPS ( FILE AND PRINT SHARING )

INDUSTRIAL COMPUTERS – USE FOR A SPECIFIC INDUSTRY. ( MOSTLY HAVE ENCLOSURES TO PROTECT DEVICES)

* OPTICAL ENCLOSURE FOR DEVICES IN OUTDOOR
* OPTIONAL PRIVACY DISPLAY SCREEN
* OPTIONAL LCD ENCLOSURE
* MEETS RECCOMENDED HARDWARE REQUIREMENTS BASE ON APPLICATIONS

MOBILE COMPUTERS – SPECIAL DESIGN CONSIDERATIONS/ ‘ON THE ROAD’ COMPUTER DESIGN

* POSSIBLE SSD
* LAPTOP OR TABLET SUFFICIENT RAM FOR BROADBAND CONNECTIVITY
* POSSIBLE PROJECTORS OR THERMAL PRINTERS
* COMPATIBLE SMARTPHONE’
* POSSIBLE PORTABLE SPEAKERS AND MICROPHONE WITH NOISE CANCELLATION

STORAGE AND INOUT OUTPUT DEVICES

INPUT IS THE FEEDING DATA INTO THE COMPUTER

OUTPUT IS DISPLAYING THE DATA FROM THE COMPUTER

STORAGE IS THE HARDWARE THAT STORE AND HOLD DATA

SSD – STORAGE MEDIUM THAT HOLD AND ACCESS DATA

PRIMARY STORAGE – IT IS THE MAIN MEMORY THAT HOLDS IMPORTANT AND VITAL FILES/PARTS OF COMP. LIKE RAM , OS, BIOS. THEY ARE VOLATILE.

SECONDARY STORAGE – USUALLY THEY ARE THE STORAGE FOR OUR FILES DOCUMENTS ANDMANY MORE. LIKE SSD AND HDD. NON – VOLATILE

FLASH DRIVE- REMOVABLE AND REWRITABLE MEMORY CHIP

EXTERNAL DRIVE- IN A ENCLOSURE ONE.

OPTICAL DISC – A DISC THAT USES A LASER TO READ THEM’

NETWORK ATTACHED STORAGE – THEY ARE CONNECTED TO A ONE NETWORK TO ACCESS DIFFERENT COMPUTERS.

CLOUD STORAGE – A NETWORKED STORAGE THAT IS LOCATED IN A DATA SERVER HOSTED BY THE THIRD PARTIES.

FLASH MEMORY CARD- USUALLY THEY ARE USED FOR DIGITAL CAMERAS STORAGE

OPERATING SYSTEM – ONE OF THE CORE SOFTWARE PROGRAMS THAT RUNS ON HARDWARE AND USABLE FOR THE USER TO INTERACY WITH THE HARDWARE TO SEND COMMAND INPUT AND RECEIVES RESULT OR THE OUTPUT. SIMPLY,

USER ---- OPERATING SYSTEM ---- HARDWARE

FUNCTIONS OF OS

1. INTERFACE BETWEEN USER AND THE HARDWARE – THEY MAKE A USER INTERFACE FOR THE USER TO COMMUNICATE AND USE THE HARDWARE.
2. COORDINATE WITH HARDWARE COMPONENTS – THE OS CAN REACH AND COMMUNICATE WITH THEM USING DEVICE DRIVERS THAT IS INSTALLED IN EACH AND EVERY ONE OF THEM.
3. PROVIDE ENVIRONMENT FOR SOFTWARE TO FUNCTION – OS PROVIDE SOFT APP TO RUN IN THE COMPUTER.

SOFTWARE APPLICATION – SPECIFIC SOFTWARE THAT HAS A SPECIFIC TASK TO PERFORM TO.

1. PROVIDE STRUCTURE FOR DATA MANAGEMENT – WE CAN MANIPULATE FILES, DATA, FOLDERS, MOVE, COPY , RENAME,ETC. OS PROVIDES THE DATA MANAGEMENT.
2. MANAGE SYSTEM HEALTH AND FUNCTIONALITY – WE CAN DETECT OUR SYSTEM HEALTH AND HARDWARE COMPONENTS USING A SOFTWARES OR THE OS .

OS CHARACTERISTICS

1. LICENSING – WE HAVE OPEN-SOURCE OS (FREE AND MODIFYABLE), FREE OS (FREE BUT NOT MODIFYABLE) AND COMMERCIAL (NOT FREE AND NOT MODIFYABLE).
2. SOFTWARE COMPATIBILITY- WINDOWS, LINUX, MAC …

EXAMPLE IS : WINDOWS 10 HOME 64 BIT IS DIFFERENT WITH WIN 10 PRO 64 BIT

ANOTHER ONE IS WINDOWS 10 AND WINDOWS 11 64 BIT

1. COMFLEXITY – TWO EDITIONS (32 BIT AND 64 BIT)….