OPERATING SYSTEM SOFTWARE

600. What is **Software**, programs

601. What is a **program** sets of instructions that tell the computer what to do

602. **How are programs installed** Usually put CD in follow prompts

603. **How are programs best uninstalled** Start, Control Panel, Add Remove programs. So that all parts are removed. Don't just delete them. This leaves scattered parts.

604. **byte 8 bits** bit binary digit a 1 or 0 smallest unit a computer can understand

605. **file** a named collection of data or information

606. how does **GUI** compare with DOS has black screen with words all commands must be typed in. 332 But the GUI is like Windows. user clicks on objects, buttons & menus.

607. **DOS** Disk Operating System command line interface uses typed commands at command prompt

608. **Operating System** OS software that runs computer coordinates all activities of hardware devices

609. **examples of system software**   Windows, DOS, Mac OS, Linux, Ubuntu, Unix

610. utility programs maintain computer or files.

611. examples of utility programs: Windows Explorer, Defrag, Scandisk disk cleanup.msconfig

612. **Linux** a free UNIX like operating system often has a GUI on top

613. **Linus Torwalds** invented Linux and gave it to the world for free

614. **Why is Linux important**? it is both a free and very good operating system. No crazy long serial number needed, eliminates need to pay tribute to the Microsoft God.

615. <u>**Why is open source software important**</u>? gives you good software for free

616. What is shareware?   try before you buy software

617. public-domain software.   Software that has been put in the public-domain

618. menu   A list of choices

619. **pointer** a movable icon that shows where one is on the screen

620. **OLE** Object Linking & Embedding programming that allows one to cut and paste

621. **scandisk** (error check) **This program tunes up the directory of disks.   Run it often**

622. **GUI** Graphical User Interface where a user can click on objects. example Windows

623. Disk formatter a program that prepares a disk to be used.

624. **Memory** a temporary storage place for data waiting for use by the CPU. is usually volatile.

625. **Driver** is a small program that runs or interfaces with a device like a printer driver

626. **Plug and Play** series of programs that allow the computer to install devices.

627. **file compression** the process of making a file take up less space.

628. **Defragmenter** a program which repairs fragmented files.

629. **How to warm boot**   Ctrl-Alt-Del or reset button is a faster than cold boot less shock

630. **Cold boot** is starting the computer from a power off state

631. **ASCII** American Standard Code for Information Interchange, most widely used data coding system.

632. digital convergence the trend to merge multiple digital services into one device.

633. **digital** counting digits or a sudden large change of state on off high voltage low voltage

634. **Columns in Binary** 1024, 512, 256, 128, 64, 32, 16, 8, 4, 2, 1

635. Binary 1-18   1 10 11 100 101 110 111 1000 1001 1010 1011 1100 1101 1110 1111 10000 10001 10010

636. binary number system uses only 0 & 1 is used by digital devices be able to count to 1024 in binary

637. To see table go to Wikipedia search for **ASCII** scroll down observe table

638. **hexadecimal (hex) is the base-16 numbering** system introduced by IBM The number 79 in binary 01001111 in hex is 4F. Hex is used in computing as the most common form of expressing human-readable byte as all 256 values in a byte can be represented using 2 digits in hex.

639. **What is 1-16 in hexadecimal**   1 2 3 4 5 6 7 8 9 a b c d e f 10

640. Columns in hex are 1048576, 65536, 4096, 256, 16, 1 Use the Windows calculator to compute

641. **gigaflop**: speed measurement of microprocessors billions of floating point operations per second

642. **Unix** multiuser operating system often used by large computers

643. smart fones use a small OS like symbian, BlackBerry, Windows Mobile, OS x, Android and web OS. These can run more than one application concurrently.

644. Gaming consoles have an OS. Often called firmware.

645. Linux is increasingly used.

646. Android OS by Google is Linux based.

647. Noktia MeeGo is also based on Linux.

648. Sugar the sweet OS for every child laptop.org used on XO-1 notebook

649. See page 221 for boot process. Good to read for understanding.

650. **Safe mode hit f8 during early boot process**

651. **CPU MACHINE CYCLE** 1 FETCH FROM RAM AND MOVE TO CPU, 2 DECODE INTO COMMANDS, 3 EXECUTE THE WORK OF THE COMMAND, 4 STORE RESULT IN REGISTER IN CPU ALL DONE IN SYNC WITH SYSTEM CLOCK. 2 Billion clock ticks a second.

652. **Cache** memory located on or near CPU for faster access. Se page 357

653. **word size** is the number of bits a computer can work with at a time. Example 32 bit or 64 bit processor. Moore's Law # of transistors will double every 18 months.   8086 chip had 29,000 transistors in 1980 and ran at 5 Mhz. Pentium 4 had about 43 million transistors and ran at 1.3 Ghz- 3.8 Fhz in 2000-2008 at 100 Mhz but has a quad pumped Front side bus. In 2010 Intel i7 has 774 million transistors and Intel Itanium 9300 has 2.3 billion transistors execute six instructions per clock cycle at 1.73 Ghz Six cores.

654. Intel i7 2600K processor machine has 16 GB ram 2 2TB Hard drives and 2 video cards.

655. AMD PhenomII has six cores so one CPU does work of six.

656. **Pipelining** a technique that allows the CPU to work on more than one instruction at a time thereby boosting performance.