

“The heart has it’s reasons, which reason knows nothing of.”

Blaise Pascal

History and

Evolution of the Computer
Industry

- 1000 BC - Chinese used abacus
- 1642 - Pascal - invented mechanical adding machine
- 1694 - Leibnitz - Mechanical calculating machine
- 1801 - Jacquard - punched card machine to operate weaving looms

- 1822 - Charles Babbage - Difference engine
- 1833 - Babbage - Analytical engine
Father of computers
- 1834 - Lady Augusta Lovelace - first programmer
- 1880 - Hollerith - device to code data and sort cards

- 1896 - Tabulating Machine Company organized by Hollerith
- 1914 - Hollerith retires - T. Watson becomes president of tabulating company
- 1924 - Tabulating Machine Company changed to International Business Machines Corporation

- 1937 - Atanasoff & Berry - ABC computer -first electronic digital computer
- 1940 - Aiken - Mark 1 - first automatic calculator
- 1943 - Turing - Colossus - computer that broke German codes in WWII.
- 1945 - Dr. Jon von Neumann -stored program concept

- 1946 - Mauchly and Eckert - ENIAC - first large scale electronic digital computer
- 1949 - Wilkes - EDSAC - first stored program computer
- 1951 - EDVAC - first non-scientific computer
- 1951 - Mauchly & Eckert - UNIVAC 1-first commercially available computer

- 1954 - TRADIC - first transistorized computer
- 1965 - DEC introduces first minicomputers
- 1969 - Dr. Ted Hoff - Microprocessor(chip)
- 1976 - Apple 1 computer developed - Apple Computer INC. organized
- 1979 - Bill Gates' Microsoft offers OS
- 1981 - IBM PC introduced

- 1982 - Lotus 123 introduced
- 1989 - Tim Berners-Lee invents WWW
- 1997 - DVD's introduced
- 2000 - Dot-com companies go out of business at rate of 1/day.
- 2004 - USB flash drives grow in popularity

- 2006 - Nintendo Wii introduced
- 2007 - Apple introduces iPhone- sells 270,000 in 2 days
- 2008 - Bill Gates retires
- 2009 - All TV stations must broadcast in digital
- 2010 - Hard disk capacity increases - largest holds +2.5TB
- 2010 - Apple releases iPad
- 2011 - Netbooks grow in popularity
- 2011 - Cloud storage grows in popularity

- 1987 - 80386 chip introduced
- 1989 - 80486 chip introduced
- 1994 - Pentium chip introduced
- 1997 - Pentium II chip introduced
- 1999 - Pentium III chip introduced
- 2000 - Pentium 4 chip introduced
- 2002 - Pentium 4 chip revamped
- 2006-07 - Core 2 Duo processor introduced
- 2009 - Core processor family enhanced

<http://www.intel.com/pressroom/kits/quickreffam.htm#core2>

- Watch your thoughts; they become your words.
- Watch your words; they become your actions.
- Watch your actions; they become your habits.
- Watch your habits; they become your character
- Watch your character; it becomes your destiny.

-Frank Outlaw

First Generation 1951-58

- Used vacuum tubes
- Large in size
- Required much air conditioning
- relatively slow
- Used magnetic drum storage media
- used machine language
- speeds - thousandth of second
- storage capacity - (4,000)

Second Generation 1958-64

- Used transistors
- Smaller
- Less Expensive
- Generated less heat
- Magnetic core replaced magnetic drum
- Supported auxiliary storage devices

Second generation cont.

- Used high level language
- speeds - millionth of second
- storage capacity (32,000)

Third Generation 1964-70

- Used integrated circuits
- Integration of hardware and software
- Handled more than one operation at a time
- Speeds - Billionth - Trillionth of second
- Storage capacity (128,000)

Fourth Generation 1970-74

- Used LSI
- Communication Linkage Capabilities
- Used tv like display screen (CRT)
- Increased speeds
- Storage capacity (100 mill)

- Millisecond - one/one thousandth of second
- Microsecond - one/one millionth of second
- Nanosecond - one/one billionth of second
- Picosecond - one/one trillionth of a second

Evolution of Software

- Machine language - only language computer understands
- Symbolic language - simple words or abbreviations used in place of numbers or letters (ALC)
- High level languages -
 - Fortran - used mathematic notations
 - Cobol - most widely used business language

Evolution of Software, cont.

- Microcomputer software - games, wordprocessing, database, spreadsheet, CAI,...