**The History of Computing**

* The abacus (counting frame)
  + Calculating tool that was in use centuries before the adoption of the written numerical system
* Antikythera Mechanism
  + Ancient calculator, found in a shipwreck in 1900 close to the island of Antikythera in Greece. Estimated creation 60-70 B.C.
  + Analog Computer of great complexity – 30 bronze wheels
  + Displayed the date, positions of the sun etc. (CANVAS)
* Slide Rule
  + Also good for functions, roots, logarithms
* Pascal’s Calculator
  + Blaise Pascal & William Schickard invented the mechanical calculator in the early 17th century. (1642)
* Joseph Marie Jacquard
  + Punch card mechanism with a loom
  + Holes punched – “ON”
  + No hole bunched – “OFF”
  + Was not the first
  + 1725 Basile Bouchon made similar machine with cloth
  + 1728 Jean-Baptiste Falcon (Chain)
  + 1741 – Jacques de Vaucanson (punched paper strip)
  + 1801 – Jacquard
* Charles Babbage
  + Father of the computer.
  + Designed the Analytical Engine & Difference Engine (1822-1849)
  + Babbage never built any of his ideas.
  + The Analytical engine would have been able to do small computing (Programmable, completed by Alan Turing)
* Ada Lovelace
  + Known for her work on Babbage’s Analytical Engine
  + Her notes on the engine include what is recognized as the FIRST algorithm
  + First Computer programmer
* George Boole
  + Worked in the field of differential equations and algebraic logic
  + Author of the Laws of though
  + As the inventor of the prototype of what is now called Boolean Logic, which became the basis of the modern digital computer.
* Howard Aiken
  + Presented Mark I to IBM in NOV 1927
  + General purpose electro mechanical computer that was used in WWII
  + Mark I had 60 sets of 24 switches for manual data entry and could store 72 numbers
* Conrad Zuse
  + Submitted two patents that anticipated a von Neumann architecture.
  + Finished the Z1 in 1938
  + Contained 30,000 meatal parts and never worked well due to insufficient mechanical precision.
* 1937
  + Firth fully electrical design – John Atansofff
* 1943
  + John Mauchly and J Eckert built the Electronic Numerical Integrator and Computer (ENIC)
* 1945
  + John von Neumann comes up with the tsores program concept (Von Neumann architecture)
* 1947
  + Creation of Transistor
* Apple 1
  + Designed and hand built by Steve Wozniac in 1976
  + Steve Jobs had the idea of selling the Computer
  + Apple’s first Computer
  + To finance it, Jobs sold his VW Microbus, and Wozniac sold his HP – 65 calculator for $500
  + 1MHz CPU
* IBM PC
  + Made Computers mainstream.
  + 1981
* Apple Lisa
  + $10,000
  + 1986
  + 5 MHz CPU
* Apple Macintosh
  + Introduced by Steve Jobs on January 24 1984
  + First mass market personal Computer featuring a integral graphical user interface and mouse
  + Had 128 KB RAM (expandable to 512 KB by soldering to the logic board)
* Microsoft Windows
  + 1985 Windows 1.01
  + 1988 Windows 2.0
  + 1990 Windows 3.0