History

Definitions

____________________ (n.)
“the act of mathematical calculation”

____________________ (n.)
“the study of the principles and use of computers”

____________________ (n.)
“a programmable device for storing and processing data”

The first computation device?

More Computation Devices

Napier’s Bones
Pascaline
Leibniz’ machine
Joseph-Marie Jacquard
• 1805 - invents a ______________ loom for weaving cloth
• A program takes the form of a series of punch cards. The order of the holes determines the pattern that the machine weaves

Charles Babbage (1791-1871)
• English mathematician & inventor
• designed the first multi-purpose calculating device - the Analytic Engine

Ada Lovelace (1815-1852)
• daughter of Lord Byron
• first programmer?

Herman Hollerith
• invents a machine to assist in counting the U.S. Census
• 1890 census is completed in __________
• Hollerith creates the Tabulating Machine Company in 1896.

What makes it a modern computer?
1) __________ - not mechanical
2) __________ - not analog
3) employs the ________________
1st Modern Computer?

Differential Analyzer
• designed by Vannevar Bush in 1920s. Completed at MIT in 1942.

ABC - Atanasoff-Berry Computer
• invented by John Atanasoff (an ISU physicist) - 1937-38

ENIAC - Electronic Numeric Integrator and Computer
• designed by John Mauchley & Preper Eckert (1943), U. of Penn.
• completed in fall of 1945
• fills a room - 19,000 vacuum tubes, 1,000 relays
• 1947 - patent filed as “first electronic computer”
• 1973 - ______________________

Harvard Mark I
• invented by Howard Aiken at IBM

Konrad Zuse
• a German, sometimes considered to be the inventor of modern day computers.

Computer Architecture Basics

- Input
- Processor
- Output
- Memory
ICs (computer chips) are created by Robert Noyce & Jack Kilby.
1970 - Noyce co-founds Intel.

- Gordon Moore is the other Intel co-founder.
- Moore’s famous prediction: computer hardware will double in complexity every 18 months.