

Welcome to Computing

Presentation slides modified by M. A. Papalaskari from “Java Software Solutions Foundations of Program Design (3rd ed.)” by John Lewis and William Loftus

Overview



- **History of computing**
- **Information representation**
- **Computer hardware**
- **Computer software**

History of Computers



Mechanization of arithmetic

- Abacus (China 2400 bc)
- Stonehenge (1900-1600 bc)
- Napier's bones (c. 1600, a precursor of the slide rule)
- Pascal's adder (1642)
- Leibniz's calculator (1670s)
- **Babbage's Difference engine (1800's)**
- modern calculators

Automatic control of computation

- Jacquard loom (1801)
- **Babbage's Analytical engine (1822)**
- Hollerith's census machine (1890)

Modern Computer

- Stored program and the fetch/decode/execute cycle (John von Neumann, 1945)
- ENIAC - first fully electronic digital computer (Eckert and Mauchley, 1946)