


SHELL

Shell sends commands to the operating system.

File System is a system which has all files in it. It has a Tree structure in it.

Examples for different paths: /usr/bin /usr/bin

History

- Arabic Numerals** → A positional decimal numeral system
→ A system is based on ten different glyphs

- Algorithms** → It's an approach to perform calculations using the Hindu-Arabic numeral system
→ Doing systematic solutions to linear and quadratic equations
→ Finite sequence of well-defined instructions, typically to solve a specific problem

- Da Vinci's Mechanical Calculator** → Drawings were found in which he sketched a model for a mechanical calculator.

- Wilhelm Schickard** → Arguably made the first ever mechanical calculator

- Pascal** → Wrote a seminal essay on solid geometry and invented the "Pascaline"
→ Developed 50 different models of the Pascaline.
→ Discovered fundamentals of fluid dynamics
→ Invented hydraulic press
→ Made Pascal triangle

- Kelvin** → Absolute temperature before the correct absolute 0 temperature was found.
→ constructed an extremely advanced analog computer to predict the tides

- Felt's Comptometer** → invented the comptometer, essentially a mechanical table calculator

- Felt's Comptograph** → First error printing adding machine

- Charles Babbage** → creator of difference engine to compute polynomial functions.

The Analytical Engine → Programs using punched cards which could be used as inputs.

Ada Lovelace → Described as the world's first programmer.

Boolean Algebra → Basic operations are

- AND (conjunction)
- OR (disjunction)
- NOT (negation)

Hollerith II → The tabulating machine company later became known as the International Business Machines Corp.

Antikythera → Analog computer to predict astronomical positions and eclipses.

IBM Multiplying Arch → 601 could multiply two 8-digit numbers.

Hamming Code → Punch cards were used to read programs, but computers frequently made errors in reading.
→ Hamming code was developed which is an error detecting/correcting code.

Transistor → Replacement for vacuum tubes and a transfer resistor or transistors were invented.

Structured Programming → Every possible program can be expressed in sequence, loops and selection.