



Long, Appropriately Descriptive Title

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Title

- Bullet
- Bullet
- Bullet
- Bullet
- Bullet with cited information [wiki:comp]

Computers

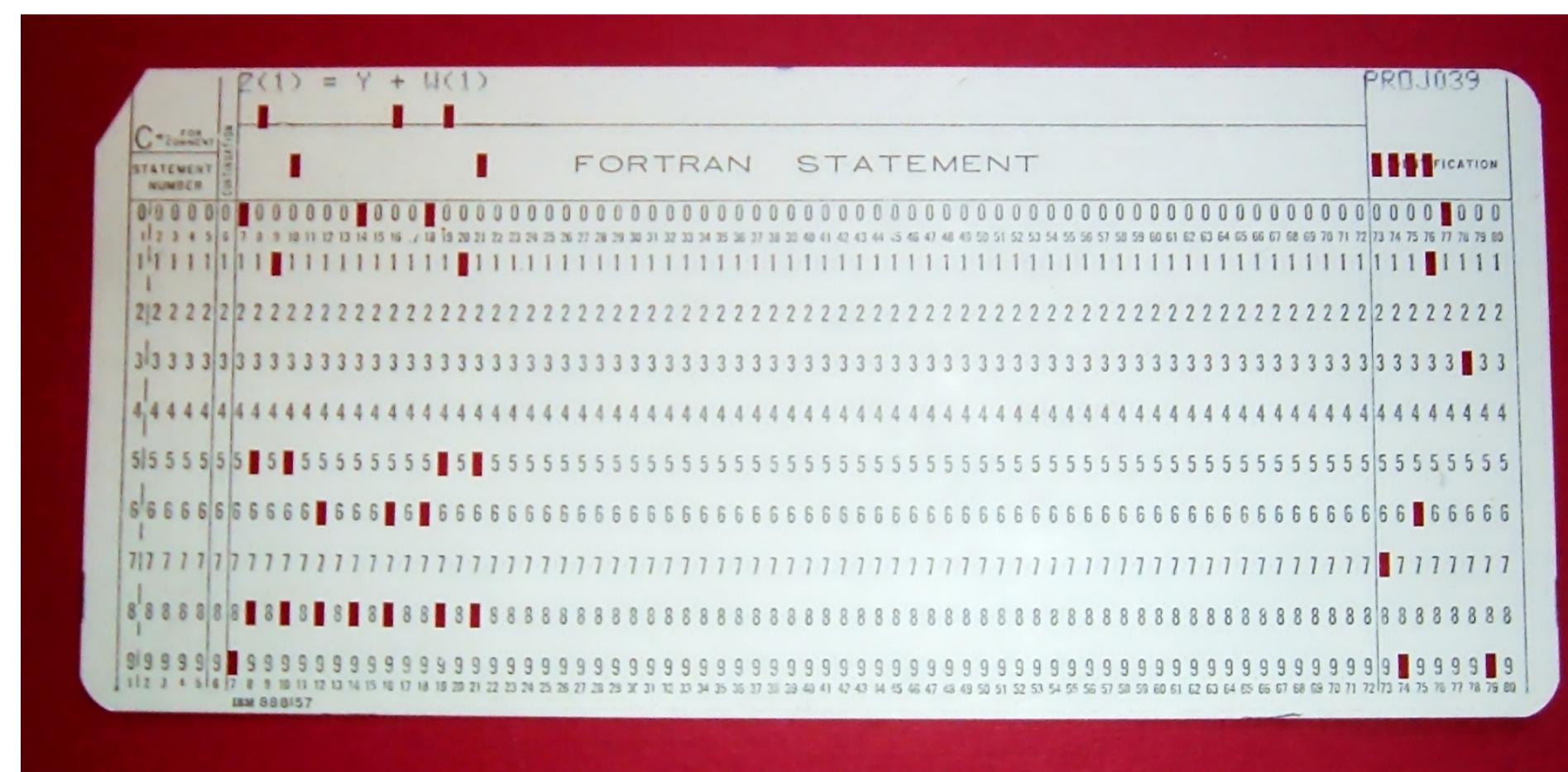


Figure 1: Top: A punch card. Bottom: A hard disk drive [wiki:comp].

- The punch card contains one line from a FORTRAN program [wiki:comp]
- Hard disk drives are more commonly used these days

Force, Mass, and Acceleration

- These quantities are related as:

$$F = ma$$

- physics is cool
- but sometimes it can be confusing
- especially when you involve relativity

Another Title

- Bullet
 - Sub-bullet
- More equations:

$$a^2 + b^2 = c^2$$

- Here comes the complicated stuff:

$$E = mc^2$$

$$i^2 = -1$$

- Math is fun too
- Triangles are a great shape
- Here's the second law of thermodynamics:

$$dS \geq 0$$

- Energy and heat dissipate over time

Bullets with no Equations

- Less exciting, but still information
- Bullet
- Bullet
- Bullet

Results

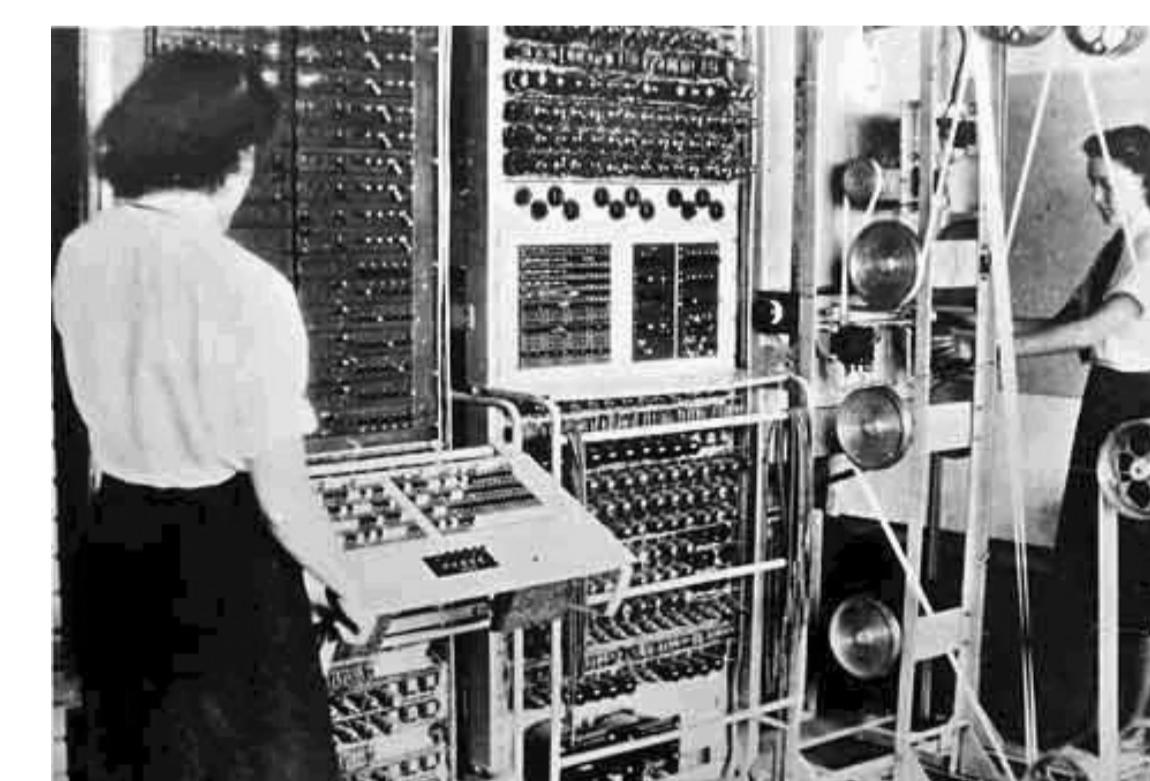


Figure 2: Colossus, a cipher-breaking machine [wiki:comp].

Table Title

- | | |
|----------------|------------------|
| Code 1, Ver. 1 | $val \pm \sigma$ |
| Code 1, Ver. 2 | $val \pm \sigma$ |
| Code 2, Ver. 1 | $val \pm \sigma$ |
| Code 2, Ver. 2 | $val \pm \sigma$ |

Runtimes

- | | |
|----------------|------|
| Code 1, Ver. 1 | slow |
| Code 1, Ver. 2 | fast |
| Code 2, Ver. 1 | slow |
| Code 2, Ver. 2 | slow |

- Code 1 is faster than Code 2

- But is it sufficiently accurate?

- Make sure to analyze results carefully!

Results - Another Computer

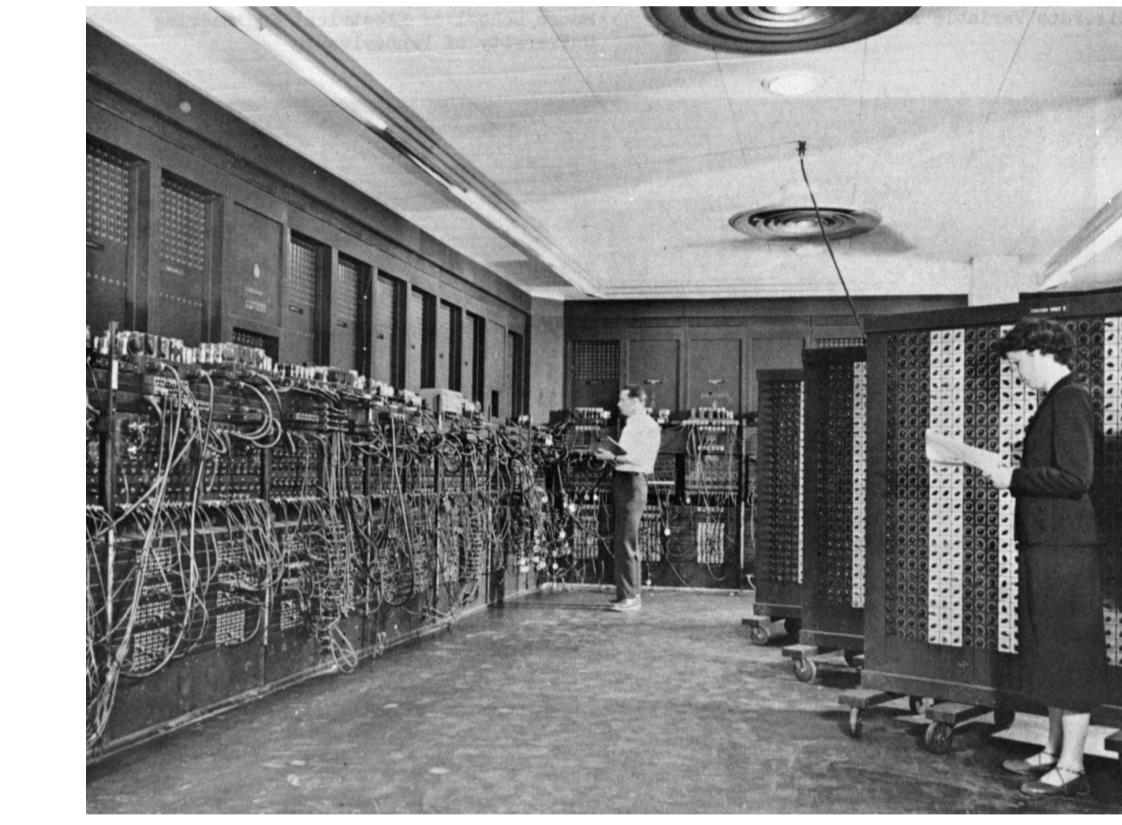


Figure 3: ENIAC, the first Turing-complete machine [wiki:comp].

- First electronic programmable computer built in the US
- Faster and more flexible than Colossus [wiki:comp]

ENIAC Results

- | | |
|----------------|------------------|
| Code 1, Ver. 1 | $val \pm \sigma$ |
| Code 1, Ver. 2 | $val \pm \sigma$ |
| Code 2, Ver. 1 | $val \pm \sigma$ |
| Code 2, Ver. 2 | $val \pm \sigma$ |

ENIAC Runtimes

- | | |
|----------------|-----------|
| Code 1, Ver. 1 | fast |
| Code 1, Ver. 2 | very fast |
| Code 2, Ver. 1 | fast |
| Code 2, Ver. 2 | fast |

Future Work

- Build better computers
- Maybe vector machines?
- Have some fun!

References

Acknowledgements

This material is based upon work supported under a Fungineering Fellowship. This work was partially supported by the Department of Excellence under Award Number(s) 3: The Good Work Association.