Important Figures in Computing History

Ada Lovelace

Ada Lovelace (1815 – 1852)

Who was Ada Lovelace?

- She was an English mathematician
- She published the first ever algorithm
- She was the world's first computer programmer

Important Figures in Computing History

Why is Ada Lovelace important?

- She produced the world's first computer program
- She was one of the first people to believe that machines could do more than perform calculations

A young Ada

Her early years

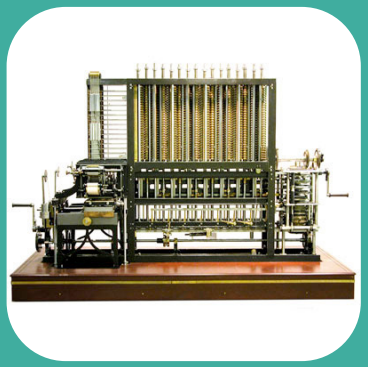
- Born 10th December 1815
- The daughter of famous poet, Lord Byron

Father, Lord Byron

- Ada's mother had a keen interest in science and mathematics, and insisted that she study mathematics, which was unusual for a woman at that time
- Ada showed a gift for mathematics early on

Important Figures in Computing History

- Ada developed her passion for mathematics with private tutors
- She met the brilliant mathematician and inventor Charles Babbage in 1833 when she was eighteen
- He nicknamed her the 'Enchantress of Numbers'
- Babbage showed her the designs for his Difference Engine and, later, the Analytical Engine – a machine powered by steam that would perform calculations



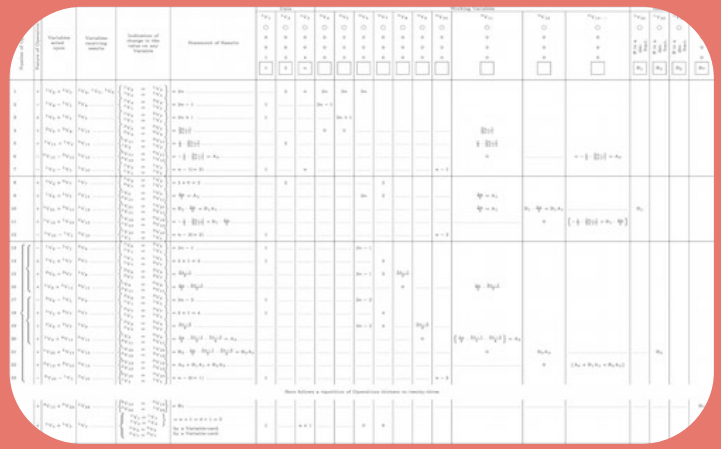
The Difference Engine
Science Museum, London

- Married William King in 1835
- They had three children
- She died on 2 th November 1852

Important Figures in Computing History

Ada Lovelace - Algorithms and programming

- In 1843, Ada published an article in the English Science Journal about Babbage's Analytical Engine
- Ada described how codes could be used for the Analytical Engine so that it could interpret letters and symbols along with numbers
- She also wrote about how the machine could handle repetition in instructions and that it could have uses beyond just calculating, like creating pictures and music (graphics/audio)
- Ada produced the step-by-step set of instructions (algorithm) for using the Analytical Engine - it is for this reason that she is known as the world's first computer programmer



Ada's diagram for computation of Bernoulli Numbers