



Ada LOVELACE

(1815 - 1852)

Ada Lovelace is the world's first computer programmer. She was the first person to write a program - a series of commands that Charles Babbage's mechanical computer could use to do complicated calculations. Ada believed machines could do more than just maths and correctly predicted many of their future uses, such as creating graphics and music.

Ada's Childhood

Augusta Ada King, Countess of Lovelace, was born on December 10, 1815. Her father, Lord George Gordon Byron, was a poet, and her mother was Lady Anne Isabella Byron.

Ada's mother decided that she should learn maths and science and appointed Ada's tutors. This was very unusual; at that time, girls were only expected to learn music, singing, dancing, drawing, painting, French and needlework.

Ada was mainly brought up by her grandmother, Judith, until she died when Ada was 6, and then she was brought up by a series of nannies. As a girl, Ada was often ill. Aged 8, she had terrible headaches that made it hard for her to see. When she was 14, Ada had measles which left her unable to walk and meant she had to rest in bed for a year.

Despite these setbacks, Ada continued her studies. From a very young age Ada Lovelace showed a genius for maths. As a teenager, a famous mathematician called Augustus De Morgan taught her maths. Even then, he could spot her talent for maths.



Ada aged 4

Ada and the Analytical Engine

Aged 18, Ada became friends with Charles Babbage, who was a professor of mathematics at Cambridge University. He was also very impressed with her

abilities and felt that she was better at maths than even some men – a huge complement.

She became interested in his idea to design a computing machine called the 'Analytical Engine'. But Ada did more than just translate the article – she also wrote lots of notes and detailed instructions for how the machine would work. In fact, Ada's notes were so detailed that they were 3 times as long as the original article!



Ada aged 17

When the article was published, Ada did not use her full name on the article, just her initials 'A.A.L.'. The reason Ada did this was because she was being modest. At that time it was felt that if you strained your mind by doing too much maths, you would become physically strained, and that if you were physically weak that meant you were mentally weak too.

Ada the Visionary

Ada's notes included an 'algorithm' (step-by-step instructions) for using the Analytical Engine - the first set of instructions that could be used to control a computing device.

Ada also believed that mechanical computers would one day be able to do more than just sums. She correctly predicted many of their future uses, such as creating art graphics and music.

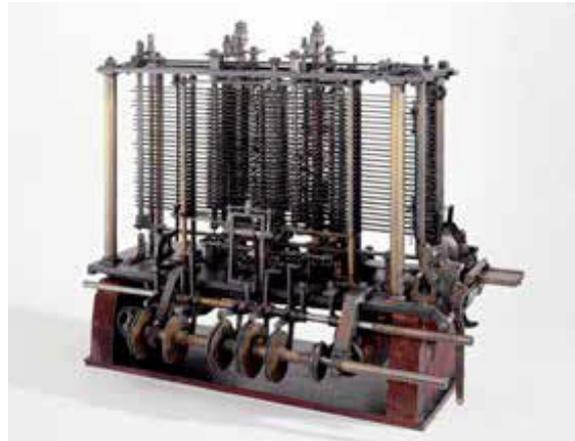


Punch cards for the nevercompleted Babbage Analytical Engine, and Charles Babbage

But the machine was never built. Lack of money meant that the computing machine never came to be. Unfortunately, in time, Ada became ill and later died at a young age of 36 in 1852, leaving behind a husband and three children.

The World's First Computer Programmer

For more than a hundred years after her death, Ada Lovelace's notes on the Analytical Engine were forgotten. But in 1953, her notes were discovered and republished. This time people recognised her achievements. Ada's notes describe what we would now call a computer program, and she understood more than others of her era just what a computer could do. For this reason, Ada is the world's first computer programmer.



Charles Babbage's Analytical Engine, 1834-1871. (Trial model) Analytical Engine, and Charles Babbage

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