

Explain the significance of Babbage's calculating engine and the role of Ada Lovelace.

Charles Babbage's calculating engine had a great deal of influence or can be called an intelligent forerunner on what we call computers today. "Babbage formulated the basic principles that drive modern computers." Charles Babbage's dream in creating a calculating machine can be seen as Charles Babbage having a vision of the future's computers and video games. "In addition to tabulating the values of mathematical functions, the machine could play chess, checkers, and other games." It was truly a forerunner to today's modern computers. So much that In 1946, when the first fully automatic computing machine was developed at Harvard, one computer pioneer referred to that accomplishment as the realization of Babbage's dream. Unfortunately it was done posthumously. Ada Lovelace was fascinated by Babbage's analytical engine and in 1843 published what was the first and only definitive explanation of how it worked and its potential uses and philosophical implications. Ada also recognized the fundamental limitation of a "thinking" machine, which is that it cannot originate or create anything new on its own. The machine can only do what it is instructed, or programmed to do.