Early Life and Education: Alan Mathison Turing was born on June 23, 1912, in London, England. He attended the Sherborne School and later studied mathematics at King's College, University of Cambridge.

Turing Machine: In 1936, Turing introduced the concept of the "Turing Machine," a theoretical model that laid the foundation for modern computer science. It demonstrated the principles of computation and algorithms and became a cornerstone of the field.

Enigma Code-Breaking: During World War II, Turing worked at Bletchley Park, a top-secret British code-breaking center. He played a crucial role in decoding the German Enigma machine, which significantly contributed to the Allies' victory in the war.

Cryptanalysis and Bombe: Turing led a team that developed the "Bombe," an electromechanical machine used to decipher the Enigma-encrypted messages. This invention drastically increased the speed of code-breaking and had a significant impact on the war effort.

Turing Test: In 1950, Turing proposed the "Turing Test," a test of a machine's ability to exhibit intelligent behavior equivalent to or indistinguishable from that of a human. It remains a fundamental concept in the study of artificial intelligence and machine learning.

Post-War Contributions: After the war, Turing worked on early computer design and programming at the National Physical Laboratory in the UK. He designed one of the first stored-program computers, known as the Automatic Computing Engine (ACE).

Conviction and Tragic Death: In 1952, Turing's homosexuality led to his arrest and conviction for "gross indecency," as homosexual acts were criminalized in the UK at the time. He underwent chemical castration as an alternative to imprisonment. Turing tragically died by suicide on June 7, 1954, at the age of 41.

Recognition and Apology: Turing's contributions to code-breaking and computer science were underappreciated during his lifetime due to the secrecy surrounding his work. However, in 2013, he was posthumously pardoned by the British government for his criminal conviction, and his contributions were recognized with a royal pardon.

Turing's Legacy in Computer Science: Alan Turing's work in computer science and artificial intelligence laid the groundwork for modern computing and digital technology. His ideas about computation, algorithms, and machine intelligence continue to shape the development of computers and programming languages today.

The Imitation Game: Turing's life and code-breaking efforts were portrayed in the 2014 biographical drama film "The Imitation Game," starring Benedict Cumberbatch as Alan Turing. The film brought Turing's story to a wider audience and highlighted his significant contributions to history and science.