Chapter 10: The Stored Program Architecture

The ENIAC

- Mauchly and Eckert develop the ENIAC for the Army at U. Penn
- the first electronic programmable digital computer system

The ENIAC

- Notable for its size and engineering complexity as well as speed and performance
- Composed of 17,000 vacuum tubes and weighing nearly 30 tons!

Von Neumann Visits the Moore School

- By the Spring of 1944, it was evident to Mauchly and Eckert that improving programming was a top priority.
- In the fall, mathematician John von Neumann visits the Moore School to participate in a new project.

The EDVAC

Called the EDVAC, the new design included the idea of storing a symbolic version of the program in some mechanism. Von Neumann publishes a draft of the design which is widely circulated.
The stored program concept permitted the program to be loaded into the computer and executed automatically. This made operating computers easier as well as reusing programs simpler. Later this concept came to be known as the von Neumann architecture.

The EDSAC
- The first operational stored program computer was developed in Britain in 1949 at Cambridge by Maurice Wilkes
- It featured a total of 1K memory storage