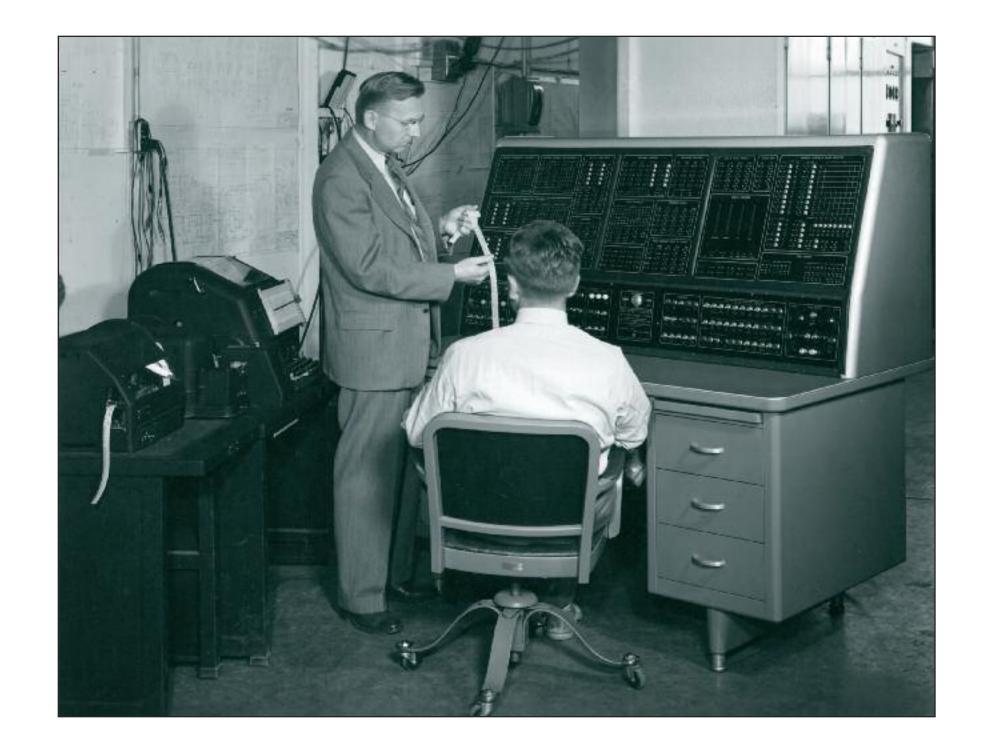
## **Punch Cards and MAPPER: The Evolution of Software**

Software can be found in every computer. Simply put, it is a set of instructions that tell a computer what to do. All software ultimately translates into binary, or 1s and 0s, which is the language of computers. The first such instructional programs were stored separately, outside of the main computer unit, on memory drums. The instructions were then loaded on paper tape and fed through the machine. UNIVAC computers such as the ATHENA operated this way. As further innovations were made, eventually the computers themselves were programmed with these instructions. Computers today have operating systems and use complex software languages.





Above: ERA engineer Jack Hill inspecting the tape from an early company computer. The first "software" was coded this way and was later replaced by punch cards.

Left: A woman sitting at the UNIVAC 418-III computer. UNIVAC programmers invented a software system to be used with this particular machine – it later became known as MAPPER. This software made it possible for anyone connected to the computer to monitor its status or print a status report. Image courtesy of the Hagley Museum and Library.

There are two kinds of people in the world, those that love MAPPER and those that don't know enough about it.

In 1968, UNIVAC had their hand in the creation of their own software language. Original created for the UNIVAC 418 computer, MAPPER, as it was known, was later adjusted for other computers and primarly used internally. Eventually a customer noticed the software while touring the factory and demanded that it be available on the 1100 series computer they were planning on purchasing. The software, which was easy to use and pioneered many approaches for its day, then became a staple of the company's commercial sales. At the company's Eagan plant MAPPER saw continued use and it is still used by Unisys under the name Business Information Server (BIS).

Lou Schlueter Former UNIVAC Employee

> From the VIP Club (retired employees) website

Below: The UNIVAC 1108 computer which was first delivered in late 1965. MAPPER software became a standard in later computers in the 1100 series and is still in use today by Unisys.

