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| **Form 1** | **Term 2** | **451 - Computer Studies** | **20-Jun-16** | **Weekly Ambush** |
| **ADM…………. NAME ……………………………………………………………………… CLASS ……..** |

# The History of Computers

Computers have been around for quite some time and were developed over many years with contributions from philosophers, inventors, engineers, mathematicians, physicists, technicians, visionaries, and scholars. The first computers were calculating machines and over time evolved into the digital computers as we know them today. It has taken over 180 years for the computer to develop from an idea in Charles Babbage head into an actual computer developed today by many different companies. Therefore, it was a long and tedious path in order to make the computer into what we now use today.

Before computers, people had to do calculations using such tools as a Chinese abacus or a slide rule to work out problems by hand. One day in 1821, Charles Babbage decided that he didn feel like working out tedious mathematics problems anymore and wanted to compute numbers using what he called a machine with steam(Palfreman and Swade 16). For the next ten or so years Babbage worked on designing the Difference Engine, however it was never built as it would have weighed several tons and taken entirely too many parts to put together. A few years later, Babbage came up with the Analytical Engine, which he designed to do arithmetic operations. This machine was programmable and the information was stored on punch cards (Palfreman and Swade 20).

Charles Babbage never did get to build one of his machines, however, his son Henry Babbage built a machine, which was based on his father ideas.

The next step in the development of computers was commercial machines. In the early 1820, Thomas de Colmar came up with the first successful commercial calculator, called the arithmometer, and it was able to perform the four basic arithmetic functions (Palfreman and Swade 22). The next progression of computers came in 1896, when the U.S. Census Bureau could not keep up with the reading and organizing of their surveys. Herman Hollerith invented the electric tabulating system, which could read the data in coded punched cards (Palfreman and Swade 24).

During, the 1930, there were two main sub-divisions in the computer world, the calculator industry and the office machine industry. In 1936, Alan Turing wrote a paper posing the question, Could a machine be designed which could compute all mathematical statements (Palfreman and Swade 29), he showed theoretically that you could use a tape with the directions on it and make the computers one function to follow directions. Turing also wrote a report on the prospects of building a model of this machine, which was later called a digital computer. Two years later in 1938, Konrade Zuses mechanical programmable calculator was developed and in 1939, the first machine to calculate using vacuum tubes was completed (White).

In 1943, the first generation computers came out which were extremely large and found only in larger businesses and laboratories. One of these computers was UNIVAC, which was the first commercially successful electronic computer (White). This computer could handle both numbers and text and used magnetic tape to input information. Some years later, in 1959, the second generation of computers was developed. These were based on transistors and printed circuits, resulting in a much smaller and more flexible computer. The next generation of computers, began in 1964. These third generation computers were based on the first integrated circuits (White). Thus this produced even smaller computers, which could be found in smaller businesses.

The start of the fourth generation of computers started in 1972 when the first personal computer was developed. These computers were based on LSI (Large Scale Integration) circuits (such as microprocessors) (White). This first personal computer was the MITS Altair 8800, which was released by Micro Instrumentation Telemetry Systems. This system was sold as a kit that the buyers had to put together themselves. It only contained a limited amount of memory and processing power. Remarkably enough approximately 200 kits were sold the first day that it was available (White).

At the present time, computers are extremely small and amazingly powerful. Many experts feel that the personal computer won be able to get any smaller as they already heat up to high temperatures. The two main companies selling computers today are Apple and Microsoft, which are selling them at very affordable rates that enable most of the population of the world to have a computer. These computers are offered with large amounts of memory and processing power.

Therefore, it has taken over 180 years for computers to develop and progress to become the machines, as we know them today. It took the ideas and hard work of hundreds of people to come up with such an extraordinary machine as the computer. Who knows where the world of computers is going to head from here. Someday there may be computers that literally fit into the palm of our hand if not smaller, and are able to do much more astonishing tasks. The only way to find out is to wait and see what the future holds for the computer world.

## Bibliography

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