**The history of computers**

Computers and smartphones have become an inseparable part of our lives and as such, it is only natural for us to know how they came to be. Be that as it may, turns out many people don’t know the origin of these devices, which we use every single day. That’s why I will take you back in time and walk you through the history of computers.

**First steps**

In the year 1801, a French weaver and merchant named Joseph Jacquard invented the first programmable loom, which used punched wooden cards to weave fabric designs automatically. Similar cards would later be used by early computers.

In 1822 an English mathematician Charles Babbage worked on a steam-driven calculating machine that would be able to compute tables of numbers. Sadly, the project was a failure but it laid the foundation for the world’s first computer later.

Fast-forward 70 years into the future, in 1890 Herman Hollerith, an American businessman, developed an electromechanical tabulating machine for punched cards, in order to calculate the 1880 census. He managed to accomplish the task in just three years, which saved the government $5 million. The inventor also established a company that would ultimately become IBM.

**Foundation for modern computers**

Once again, we have a time-leap of almost half a century, to the year 1936. This was the time, when Alan Turing, an English mathematician and computer scientist, presented a universal machine, later called the Turing machine, which is capable of computing anything that is computable. The modern computer would later be based on the concept of this invention.

In 1939, the Hewlett-Packard Company, which is a lot more familiar as HP, was founded by David Packard and Bill Hewlett in a garage in Palo Alto, California.

Atanasoff and his graduate student, Clifford Berry, designed a computer that can solve 29 equations simultaneously in the year 1941. This marks the first time a computer was able to store information on its main memory.

In 1943-1944 the Electronic Numerical Integrator and Calculator (ENIAC) was built by two University of Pennsylvania professors, John Mauchly and John Eckert. Their invention is considered the grandfather of digital computers. It filled a 20-foot by 40-foot room and had 18 000 vacuum tubes.

1947 was a revolutionary year, because that was when the transistor was invented. It was finally discovered how to make an electric switch with solid materials and no need for a vacuum.

**First programming languages**

In the year 1953 Grace Hopper, an American computer scientist, developed the first computer language, which would eventually become known as COBOL and the FORTRAN programming language was developed by a team of programmers at IBM in 1954.

**Era of computer chips**

In 1958 Jack Kilby and Robert Noyce presented the integrated circuit, known as the computer chip.

As early as 1964 Douglas Engelbart showed a prototype of the modern computer with a mouse and a graphical user interface (GUI). This marked the evolution of the computer from a specialized machine for scientists only to technology that is more accessible to the general public.

The UNIX operating system, written in the C programming language, was developed in 1969. It was portable across multiple platforms and was preferred by large companies, but didn’t gain much popularity among the public due to its slow nature.

In 1970 Intel (founded in 1968) presented the Intel 1103, which was the first Dynamic Access Memory (DRAM) chip.

The floppy disk was invented one year later, allowing data to be shared among computers.

In 1973 Robert Metcalfe developed the Ethernet for connecting multiple computers and other hardware.

Over the course of the next 4 years, a number of personal computers hit the market, like the IBM 5100, Radio Shack’s TRS-80, known as the “Trash 80” and the Commodore PET.

**Apple and Microsoft rivalry**

In 1975 the Popular Electronics magazine featured the Altair 8080, described as the "world's first minicomputer kit to rival commercial models." Paul Allen and Bill Gates, two “computer geeks”, offered to write software for the Altair, using the BASIC language. This proved to be a success, which led to them founding their own software company, Microsoft.

1976 was the year when Steve Jobs and Steve Wozniak started Apple Computers and rolled out the Apple I, the first computer with a single-circuit board, marking the start of the competition between Apple and Microsoft.

One year later, they showed the Apple II which offered color graphics and had audio cassette drive for storage.

The first IBM personal computer, code-named “Acorn” was introduced in 1981. It had an Intel chip, two floppy disks and an optional color monitor.

On the other hand, in 1983 Apple released the first personal computer with GUI, code-named “Lisa”. It eventually evolved into the Macintosh. Also, the Gavilan SC was the first portable computer marketed as a “laptop”.

In 1985 Microsoft announced Windows, which was their response to Apple’s GUI. In the same year, the first dot-com domain name was registered by the Symbolics Computer Company – Symbolics.com. This was years before the World Wide Web.

**The World Wide Web**

Finally, in 1990, Tim Berners-Lee, a researcher at CERN, developed Hypertext Markup Language (HTML), inventing the World Wide Web.

The Google search engine was developed in 1996 by Sergey Brin and Larry Page at Stanford University.

In 1999 the term Wi-Fi made it to the world of computers and users began connecting to the Internet without wires.

In 2001 Apple released the Mac OS X operating system, which provided protected memory architecture, among other benefits. In order to keep up with the competition, Microsoft unveiled the Windows XP OS.

Facebook, a social networking site, launched in 2004 and YouTube, a video sharing service, was founded one year later. In the same year, Google acquired Android, a Linux-based mobile phone operating system.

**Era of smartphones**

The revolutionary iPhone was introduced by Apple in 2007, which brought many computer functions to the smartphone.

Microsoft launched Windows 7 in 2009, offering improvements in design and functionality.

Apple Watch was released in 2015 and so was Windows 10 by Microsoft.

In 2016 the first reprogrammable quantum computer was created. This implies that even further technological development awaits and that there is always room for improvement.

Over the course of the several years until 2021 manufacturers improve their products and all that is left for us users is to await the next big revolutionary invention like autonomous/flying cars, brain implants, etc.