Induction assignment for Computer Studies AS

The CPU Began with a 5 MHz 8086 processor, and today we are normally seeing 1.8 GHz to up over 2 GHz. This shows a huge development many years can make.

CPU has transformed over the years and has been making huge developments and will carrying on doing so in the future.

Intel was the first company who came out with the initial processor. IBM chose Intel's 8088 processor for the brains of the first PC.

The Intel-8086 came out in 1978, this chip was skipped with use with the original PC, but it was used in computers that didn't require a lot of speed. It was a 16-bit processor. The chip contained 29,000 transistors and 20 address lines that gave it the ability to talk with up to 1 MB of RAM. The designers of the time created the chip to only offer 1 MB of RAM; they never thought that more would be needed. The chip was also made in 5,6,8, and 10 MHz versions.

One year later the Intel-8088 was launched. It was identical to the 8086; the only difference noted was that it handles its address lines differently. This chip was chosen for the first IMB PC.

In 1980 Intel 80186 was released. The 186 chips were well known. The chip contained many things, with the system controller, Interrupt controller, direct memory access controller (DMA) and timing circuitry right on the CPU. Yet this chip never adapted a role in a personal computer. There was 8 bit or 16 bit versions. They had a 1-micron core design and ran at about 25MHz at 3 volts. A micron is a unit of measurement equal to 1,000 nanometres. A nanometre is one-billionth of a meter. This measurement is often used to describe the distance between transistors in a processor.

In 1981 NEC V20 and V30 was launched these were clones of the 8088 and 8086. They were have said to be about '30% faster' than the Intel ones.

In 1982 Intel 80286 was on the loose. A 16-bit, 134,000 transistor processor capable of addressing up to 16 MB of RAM. With the Increased physical memory support, this chip is able to work with virtual memory; virtual memory is when your able to save on the hard drive, therefore allowing extra memory. The 286 were the first "real" processor. It had the facility to multitask, having separate programs run individually but at the same time. It ran at 8,10, and 12.5 MHz, but later editions of the chip ran as high as 20 MHz. While these chips are not as popular today, they were rather leading one at that time period.

The development of Intel making better processors was inevitable, therefore the improvement carried on, from strength to strength.

If we look at the year 1989 we can find the Intel 486. It was a 32-bit processor containing 1.2 million transistors. It had the same memory as the 386 (both were 32-bit) but was capable of working at twice the speed at 26.9 million instructions per second (MIPS) at 33 MHz. From the year 1982 to the year 1989 the progression of the development in processors was brilliant.

In 1993 the Intel 486 was well established into the market. When Intel's next processor was ready it was called, 80586 but it was not possible for Intel to trademark the numbers 80586. So, as an option, Intel changed the name of the processor to the Pentium, a name they could easily trademark. They released the Pentium I in 1993.

- Pentium II was released in the year 1997.
- Celeron (1998)
- Pentium III (1999)
- AMD Athlon (1999 - Present)
- Celeron II (2000)
- Duron (2000 - Current) AMD launched this one
- Pentium IV (2000 - Current)