Bill Gates - biography

I respect and honour Bill Gates for the innovations he has brought to computer OS and software engineering. That's why I will write a biography on his life and his becoming a prominent software engineer.

At just thirteen years old, he wrote his first program, tic-tac-toe, in a BASIC computer language. The program allowed users to play against the computer. Bill Gates was fascinated by the machine because it would execute the software code perfectly. Gates and other students would work on systems like DEC PDP minicomputers. One such system PDP-10: owned by Computer Center Corporation(CCC) - banned Gates, Paul Allen and Kent Evans for exploiting bugs in the operating system to obtain free computer time. At the end of the ban time, they offered to fix bugs for CCC's software in exchange for extra computer time. This arrangement continued until the 1970s when CCC went out of business.

One of the teachers of Lakeside school asked Bill Gates and Kent Evans to create an automated class-scheduling software system. The duo worked diligently, but Evans died that year in a mountain climbing accident that left Gates devastated. Because of this, Bill Gates turned to Paul Allen for help to finish the system for Lakeside.

At fifteen years old, Bill Gates and Paul Allen went into business together, developing "Traf-O-Data". "Traf-O-Data" was a computer program that monitored the traffic patterns in Seattle based on Intel 8008 processors. They netted twenty thousand for their efforts but didn't start their own company, as their parents wanted them to finish school and go to college.

Bill Gates devising a new algorithm for pancake sorting was one of the first signs that showed his excellence in software engineering. His solution for an unsolved question he received in a combinatorics class by professor Harry Lewis was fastest for the next thirty years. The solution that succeeds Gate's is only faster by 2%. Bill Gate's solution was formalised and publicised in collaboration with Christos Papadimitriou, Harvard's computer scientist.

Another display of outstanding computer engineering skills by Bill Gates was when he and his friend Paul Allen created a BASIC software program that would run the Altair computer. The computer was created by Micro Instrumentation and Telemetry Systems(MITS), located in Albuquerque, New Mexico. Gates and Allen contacted the company, claiming that they were working on a BASIC software program that would run the computer. In reality, they didn't have an Altair to work on and wanted to know if the MITS would be interested in someone developing such software. Surprisingly MITS was interested. The president of MITS, Ed Roberts, asked Gates and Allen to demonstrate. Here the genius of Bill Gates shined brightest. After spending two months at Harvard computer lab writing Basic software, Allen travelled to Albuquerque for the test runs at MITS. They hadn't tried the software on Altair computer before nevertheless, it worked perfectly. Allen got hired to work at MITS, and Gates soon joined him after leaving Harvard.

The BASIC software was the first product of a company named: Micro-soft, a blend of "microcomputer" and "software". At first, it wasn't going well, as only ten per cent of people who used BASIC for their Altair computer paid for their software. These circumstances got Gates to write an open letter to computer hobbyists. The letter said that continued distribution and use of software without paying for it would "prevent good software from being written". In essence, this letter said that pirating software would discourage the creation of good software, as nobody would be willing to invest their time and money for it to be - pirated.

The big turning point of Microsoft and Bill Gates was the deal with IBM. Gates employed Tim Paterson, the creator of 86-DOS: an operating system similar to CP/M. Together they adapted the operating system for PC and delivered it to IBM as PC DOS for a one-time fee of fifty thousand dollars. The contract itself earned Microsoft a relatively small fee, but the prestige earned from IBM adopting PC DOS as their main operating system was of importance. It was the origin of the transformation of Microsoft from a small business to the leading software company in the world. IBM PC running DOS became a de-facto standard of that time. And the sales of MS-DOS made Microsoft a major player in the industry, elevating Bill Gate's prestige.

Bill Gate's competition with another software and hardware engineer, Steeve Jobs, was the leading factor for the creation of Microsoft Windows as an operating system. In an attempt to fend off the competition of Apple's Machintosh GUI system, Microsoft Windows had been created on November 20 1985. Machintosh GUI is a system that used a mouse to drive a graphic interface, displaying text and images on the screen. It scared Gates, so he made a bluff, saying that a software system called Windows will be created, which will have the same features and it will be compatible with all systems using MS-DOS. And even though Microsoft had no such software in the development, it was a great advertisement. People and businesses who used MS-DOS, which was thirty per cent of the market, chose to wait a little bit rather than completely change systems.

In my opinion, Bill Gates is a great software engineer, as he is not only well at writing code. He can also strike opportunities and create bug-free code. I think these are important features of software engineers. As in the history of coding, a lot of great software engineers have not achieved anything. They solely focused on creating something but not the opportunities it would bring. A great example of this is Microsoft's and Bill Gate's rival Steeve Jobs and Apple. They refused to license their Machintosh software which resulted in Gates creating Microsoft Windows, which had striking similarities to Machintosh GUI. Even though Microsoft won the legal battle, it could have been different if the software was licensed.

All in all, I think Bill Gates is a good reference for software engineers. Not only is he an excellent example of a software engineer with great practices in code writing, but he also can spot an opportunity when presented with one.

**Sources used:**

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