**James Gosling – *‘The father of Java’***

James Arthur Gosling, known by many as “the father of the java language”, holds his place as one of the leading software engineers of the world today. Being the lead designer and founder of the Java programming language, he has inspired countless computer scientists by creating the world’s most praised and astonishing programming language. Residing in San Francisco, California, James Gosling has lived an impressive life so far, having thrived in his computer science career as well as having two children.

**Early Life and Education**

James Gosling was born on the 19th of May 1955, in Alberta, Canada. Attending high school in William Aberhart High School, it was later between the years 1973-1977 that he undertook a Bachelor of Science from the University of Calgary, in computer science. Soon following that, until 1983, he acquired a PhD in computer science from Carnegie Mellon University. His doctoral thesis was titled “The Algebraic Manipulation of Constraints”. While working towards his PhD, Gosling wrote a version of emacs titled Gosling Emacs (denounced ‘Gosmacs’). At his time in Carnegie Mellon University, he built a multi-processor version of Unix for a 16-way computer system as well as multiple compilers and mail systems.

A noteworthy contribution of Gosling in his early graduate-student days is when he created a p-code virtual machine for one of his labs DEC VAX computers, so the professor could run programs written in UCSD Pascal. Gosling credits this approach as being one of the inspirations for his later inventions, specifically the Java programming language.

**Career**

James Gosling was recruited by a company called *Sun Microsystems*, a computer company, in 1984 by the company’s co-founder Andy Bechtolsheim. His work there was not limited to inventing the Java language. An early project of his, done by a colleague and himself, was the windowing system initially called *SunDew*, later renamed as *NeWs*. The Network-extensible Windows System was designed to work with bitmapped displays on workstations. It was invented with the intention to be used across hardware platforms and operating systems but was ultimately abandoned in favour of X-Windows. This failure in no way stunted Goslings’ motivation and he continued to challenge himself in the following years with various projects.

Gosling worked with Sun Microsystems for 26 years until April 2010, when the company was acquired by the *Oracle Corporation* for $7.4 billion. The deal was finalised on January 27th 2010, Gosling left the company on April 2nd of the same year.

**The father of Java**

During his 26 years of working in Sun Microsystems, Gosling and his team developed the Java programming language. It was 1991 that the “Green Team” began developing the language. In its initial period, the language was called “Oak”, later renamed as “Green, and finally “Java”. The name “Java” was inspired by *Java Coffee.*

It is said that James Gosling got the idea of Java while writing a program to port software  a PERQ by translating Perq Q-Code to VAX assembler and emulating the hardware. Gosling was inspired by the motivation to create a language that, apart from computers, could be used to program other devices as well. Gosling's goals were to implement a virtual machine and a language that had a familiar C-like notation but with greater uniformity and simplicity than C/C++.

There were five primary goals in the creation of the Java language.

1. **It must be simple, object-oriented, and familiar.**
2. **It must be robust and secure.**
3. **It must be architecture-neutral and portable.**
4. **It must execute with high performance.**
5. **It must be interpreted, threaded, and dynamic.**

Java was originally designed to be an interactive, handheld home-entertainment controller that was originally targeted at the digital cable television industry, but the technology at the time was not advanced enough. However, the internet was quickly becoming prominent in the world and would be perfectly suited for this goal.

Sun Microsystems released the first version of Java in 1996. Java quickly became popular as it promised **Write once, Run anywhere (WORA)** implementation. It also was fairly secure and it allowed network- and file-access restriction. In 1995, Netscape Incorporated released its latest version of the Netscape browser which was capable of running java programs, this was a key turning point for Java. There were now web pages that supported the Java language so it began to take off.

Throughout the years, the Java programming language has been updated and improved to make it the most popular programming language used today. It extends from computers to mobile phones, handheld devices, web servers and embedded systems. Without Java, the software engineering world wouldn’t be what it is today.

**Gosling and Oracle**

When Sun Microsystems was acquired by Oracle, James Gosling soon decided the change in company did not suit him. Gosling was motivated to leave due to a number of reasons, including reductions in pay, status, and decision making ability. Also the change would result in Gosling getting a new role which comes with various challenges in itself. He talks openly about his disagreements with Oracle and as to why these disagreements forced him to resign.

A quote from Gosling discussing Sun Microsystems success shows the calibre of relationship that Gosling had with Oracle in his short period of working there.

*"Mostly to the folks at Oracle it just didn't make any sense. They just didn't understand it. It was like we were speaking a completely different language.”*

Later in the same quote Gosling explains how it was never feasible for him to work under this type of management.

*“They have a cultural mindset and I managed to make almost no dent at all in it... I was an Oracle employee for six weeks. It was just like, nuts.”*

**After Oracle and Sun Microsystems**

After leaving Oracle, in March 2011 Gosling started to work for *Google* as a software engineer. His time here was short lived as he worked in Google for a brief 5 months until August 2011, when he joined a start-up called *Liquid Robotics*.

In a message to *eWEEK,* Gosling stated that this move was motivated by the opportunity to work with former Sun Microsystems colleague, Bill Vass, on new and interesting projects was “*too much to turn down”.* The move also meant that Gosling would take less part in the legal battle between Oracle and Google that was happening at the time regarding the use of the Java programming language in Google’s android devices.

Liquid Robotics were a company that focused on making autonomous ocean-going robots used in oceanographic and atmospheric research. Gosling worked here as a ‘Chief Software Architect’ for 5 years and 10 months until the company was acquired by *Boeing* in December 2016.

Following this acquisition, Gosling left Liquid Robotics in May 2017 to work at Amazon Web Services as a Distinguished Engineer, where he remains today.

Among this, Gosling is an advisor for a company named *Lightbend*, an independent director at *Jelastics,* Strategic Advisor for *Eucalyptus* and is a board member of *DIRTT Environmental Solutions*

**Honours**

* **2002**: he was awarded [*The*](https://en.wikipedia.org/wiki/The_Economist) *Economist* Innovation Award.
* **2002**: he was awarded [*The*](https://en.wikipedia.org/wiki/USENIX#USENIX_Lifetime_Achievement_Award) *Flame Award*  USENIX Lifetime Achievement Award.
* **2003**: he was awarded *Software Systems Award* from the Association for Computing Machinery (ACM)
* **2007**: he was made an Officer of the Order of Canada
* **2013**: he became a fellow of the ACM
* **2015:** he was awarded the IEEE John Von Neumann Medal
* **2019**: named a [Computer](https://en.wikipedia.org/wiki/Computer_History_Museum) History Museum Fellow for the conception, design, and implementation of the [Java](https://en.wikipedia.org/wiki/Java_(programming_language)) programming language.

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