Homework 1

Dennis Ritchie was a computer scientist who helped create the C programming language. At Bell Laboratories, he helped develop the UNIX operating system. He was born in Bronxville, Eastchester, New York. He attended Harvard University, graduating with a bachelor's degree in physics in 1963 and later pursuing his doctorate in mathematics in 1968 [1]. He has garnered numerous awards, including the 1983 A.M. Turing Award, the US National Medal of Technology in 1999, and the Japan Prize in 2011 [2].

Today, many of his works help run the world. More specifically, the UNIX operating system is a basis for much of the world's computing infrastructure, and C language is one of the most widely used coding languages [3].

He helped develop the UNIX system because a lot of hardware had been tied to specific machines, and a more flexible operating system was needed. When AT&T withdrew from the Advanced Research Projects Agency, their GE machines were left with them. This led to the agency's predicament, ultimately leading Ritchie and his coworker, Kenneth Thompson, to create UNIX [1]. UNIX offered many capabilities that were not previously accessible, such as a multi-tasking, multi-user operating system, which was a lot different than the batch processing from years prior.

Thompson created the B programming language in 1970. However, B had many flaws, so Ritchie built on this and created the C programming language. Ritchie and Thompson had different backgrounds but helped each other and gave each other ideas.

Ritchie created the next iteration, which was a programming language called C. Once Ritchie completed the basis of C, Ritchie and Thompson rewrote the UNIX kernel in C.

An interesting quote that Ritchie said about the language was, “C is quirky, flawed, and an enormous success.” He passed away in October 2011 in Berkeley Heights, New Jersey.

His work has created a family of new languages, C# and C++. Overall, Ritchie and his contributions to UNIX and C have had a tremendous impact on the future of programming. They serve as the backbone of modern computing while improving the accessibility of computer programming to future generations.

Bibliography

[1]“Dennis M. Ritchie | Biography & Facts,” *Encyclopedia Britannica*. https://www.britannica.com/biography/Dennis-M-Ritchie
[2]“Dennis Ritchie - CHM,” *CHM*, Feb. 03, 2022. https://computerhistory.org/profile/dennis-ritchie/
[3]“Inductee Dennis Ritchie, Who Invented Unix, Transformed Technology,” *www.invent.org*. https://www.invent.org/inductees/dennis-ritchie