***Biography of a Software Engineer***

*John Carmack*

*CSU33012 Assignment*

*Daniel Whelan*

*19335045*

**Introduction**

Software Engineering is the systematic approach of applying engineering concepts and processes to the manufacture and distribution of software applications and programs (Laplante, 2007). It has been a discipline of study since the mid 1960’s when the term was coined by Margaret Hamilton (among others) (NASA, 2003), who used the discipline to aid in the landing of man on the moon in 1969. Since these early days of the discipline many hundreds of thousands of software engineers have emerged using the discipline to create, perfect and distribute software applications. One of these many is a man by the name of John Cormack. Cormack is an American software engineer and designer. He co-founded the video game company “id Software” and was a lead programmer on many of their leading titles and their sequels, including but not limited to “Doom”, “Quake” and “Wolfenstein 3D”. He is well known for making many advancements in 3D computer graphics, including his most well-known algorithm “Carmack’s Reverse Algorithm” which defines shadow volumes in a 3D graphical environment. He is well known for revolutionising first-person gameplay and as a result has made a massive impact on the video game industry as a whole.

**Personal Life & Career**

Carmack was born in Shawnee Mission, Kansas and grew up in Kansas City (Orndorff, 2008), He was interested in computers at an early age and was introduced to the world of video games when playing Space Invaders at an arcade in the late 1970’s. This growing love led him to attempt to break into his local high school to steal Apple II’s from the school’s computer labs, further leading to him being sentenced to a year in a juvenile home (Kushner, 2003). He attended the University of Missouri-Kansas City for two semesters before dropping out to become a freelance programmer.

A Louisiana software company, “Softdisk”, hired Carmack to work on software for the Apple II that they were building at the time, which introduced him to John Romero, another founder of id Software, alongside other key developers that helped found id. Upon the distribution of the software they were developing, Carmack, Romero and others left Softdisk to co-find id.

At id Carmack popularised and pioneered many development techniques in Computer Graphics

***Reference List***

1. Laplante, P. (2007) “*What Every Software Engineer Should Know About Software Engineering”,* (1st ed.) Boca Raton: CRC
2. NASA (2016), “*The NASA Heritage of Creativity”* (“2003 Annual Report of the NASA Inventions and Contributions Board”) Retrieved Oct. 2021.
3. Orndorff, P. (2008), “*Happy Birthday John Cormack”* Wired, August 2008.
4. Kushner, D. (2003), “*Masters of Doom”* (1st ed.), Random House.