

Lab Assignment 2 Video Notes

Dennis Ritchie

Unix is an early operating system started in 1969 by Dennis Ritchie and Ken Thompson. It led the way for many tech pioneers to come. Ritchie, Thompson, and other programmers at Bell Labs were hoping to take computers from the lab to the homefront. Mini computers came out in the early 60s and 70s and marked the beginning of the decentralization of computing. Certain software programs that users know of today are run under various versions of programs Unix or Linux. Ritchie predicted back in 2011 that technology will advance to the point where people will be provided with “wearable” computers, or other computers that are embedded in small places that we wouldn’t think possible. This is very common in today’s society, now that we are equipped with items such as iWatches, iPhones, Fitbits, etc.

Bjarne Stroustrup

Coding was initially very specialized. Certain codes were made for specific fields and purposes, for example Fortran was a software built for engineers and Cobalt was built for businessmen. In the mid 60s, the idea of object-oriented programming was introduced by programmers Ole Johan Dahl and Kristen Nygaard through their program Simula. This program put domains into classes, which made this program useful for all domains of work. The idea of a diversely used code that is low in technicalities influenced Bjarne Stroustrup to develop the language C++, which enforces these ideas. The main purpose for C++ as a program is to work for almost any hardware, and be used for a long time.

Bell Labs Unix

In Bell Labs, all workers have some kind of involvement in software programming, whether it is producing it or utilizing it. As people get used to software there becomes a demand for new features, which means they must write software that is flexible enough to change so that it is not wasted and new software must be created each year. The UNIX System is made up of three layers, the first being the kernel, which controls the resources of the machine. The second layer is the “shell” which is the interface between most users and the kernel. It waits for the user to type commands and therefore interprets them. The last layer is the utilities, which consists of useful programs such as editors, compilers for programming languages, document formatting programs, etc.

Linus Torvalds

Torvalds started Linux as a project mostly for his own purpose, but once he made it publicly available it became the source that powered the Internet. As a child, he grew up as the

stereotypical “nerd,” focusing mostly on his interests in coding. He never thought of himself as a people person, yet when people began to contribute ideas to his code he saw the light in contributing with others in order to experience success. Though he feared people and commercial interests would take advantage of his work, he still decided to reveal his project to others and take into account these new contributions. A quotation from the TED Talk that really stands out was when Torvalds was speaking about how is not a visionary, rather he claims, “I'm an engineer. I'm perfectly happy with all the people who are walking around and just staring at the clouds and looking at the stars and saying 'I want to go there.' But I'm looking at the ground and I want to fix the pothole that's right in front of me before I fall in.”