Computer Architecture Overview

In the last video, I mentioned that people don't need to understand how a computer works for them to use it, because abstraction makes things simpler for us. That's technically true, but since you're stepping to the world of IT, you do need to understand all the layers of a computer and how they work. It's essential that you understand how the different pieces interact so you can resolve any issues that may arise. Computer can be cut into four main layers, hardware, operating system, software, and users. The hardware layer is made up of the physical components of a computer. These are objects you can physically hold in your hand. Laptops, phones, monitors, keyboards. You get the idea. In the next lesson, you'll learn all of the components of a computer and how they work. You'll even be able to build your own computer by the end of this module. The operating system allows hardware to communicate with the system. Hardware is created by many different manufacturers. The operating system allows them to be used with our system regardless of where it came from. In the next few lessons, you'll learn about the major operating systems that we use today and you'll be able to understand all of the underlying components that make up an operating system. By the end of these lessons, you'll have a strong grasp on the major components of any operating system like Android or Windows, and use that knowledge to navigate any operating system. The software layer is how we as humans interact with our computers. When you use a computer, you're given a vast amount of software that you interact with. Whether it's a mobile app, a web browser, a word processor with an operating system itself. Later in this course, we'll learn how software is installed on our systems and how we interact with different types of software. The last layer may not seem like it's part of the system, but it's an essential layer of the computer architecture. The user, the user interacts with the computer. The user layer is one of the most important layers we'll learn about. When you step into the field of IT, you may have your hands full with the technical aspects. The most important part of IT is the human element. While we work with computers every day, it is the user interaction that makes up most of our job from responding to user emails to fixing their computers. By the end of the course, you'll also learn how to apply your knowledge of how a computer works to fix real-world issues that can sometimes seem random and obscure. We'll do this by learning how to utilize problem-solving tactics to identify issues and solutions. There's a lot ahead. The next instructor you're going to meet as a friend of mine, Devin [inaudible] and I know there's no better person to teach you about hardware or even show you how to build a computer from its component parts. Pretty cool

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