Lesson 3 Computer Security

The importance of individual accounts

- If you share a computer with others, it's a good idea for each user to have their own account. Everyone having their own account is better for security reasons. For instance no one can access anyone else's account without their password. But it's also good for personal organization of everyone's files. Meaning your files won't be mixed in with everyone else's files. All modern operating systems with the exception of some mobile operating systems, allow you to create individual accounts for each separate user of that computer. In Windows 10, for example, you can create new user accounts by going to the start menu, opening settings, going to accounts, and selecting family and other users. And from here, you can add a family member if for instance, you want to add an account for a kid that you can monitor, or you can choose add someone else to this PC to create an individual user account for someone who's not part of your family. I'll just close that for now. So again the point of having individual accounts is that each account on the computer is password protected so only the individual user can access to that account, which in turn provides more security for everyone else's files. Each user has their own user folder on the computer. Let's see how to get to that user folder so we can take a closer look at it. Now there are faster ways to get to some of the folders inside your user folder than what I'm about to show you. But I also want you to see exactly where this folder is located. So bear with me. Currently I don't have any windows or any applications

running. I'm going to open up File Explorer by clicking this icon here in the task bar. And then in the left sidebar of the window that opens under this PC, I'm going to select local disc. This local disc labeled the C drive is my main or startup hard drive containing the operating system and other important folders. Now most of these folders you see here are for the windows operating systems use, and you generally don't want to mess around in them unless you know what you're doing. But this is also where you'll find the user's folder. I'll double click it to open it. In the user's folder, you'll find a folder for each account on your computer with the user's name on it, or whatever the name of the account is. To view the contents of your user folder, double click it. So again your user folder is your folder. It's where you can store all of your documents, music, photos, videos, and so on. Now you can store files in other

parts of your hard drive, but there are very few reasons to do that. It's best to keep all of your personal files here in your user folder so they're all in one central location. You're also free to create additional folders in your user folder or within any of these default folders as your needs require. Anytime you're using an application and you want to save a file, for example, if you're writing a paper and you want to save it, you should navigate to your documents folder, or into a folder you have nested inside the documents folder. If you're saving photos, save them to your pictures folder. And so on. This keeps everything organized and in one central location for each individual user on the computer. Notice you can quickly access these folders from the left sidebar as well. I can click on documents to get to my documents folder,

or music to get to my music folder. To set up a faster way to get to your user folder, you can click the start menu to go back to settings. Here's like the personalization, and choose start. Then click choose which folders appear on start. From here you can choose which of your personal folders will show up in the start menu. So if you often need to open the document folder, you can make sure documents is enabled here. But I actually prefer to enable the personal folder, which is another name for your user folder. So if I close this now, when I click the start menu, notice we can now find personal folder. And that way I can get to all of my folders quickly without cluttering up my start menu too much. So that's your user folder in Windows. Again I highly recommend that you store and organize all of your personal files and other media in this location.

Strategies for creating secure passwords

Creating strong passwords is vitally important to maintaining the security of your account on your computer, and also for keeping yourself safe online. If your password is easily guessed, all of your documents, photos, and other files could potentially be viewed by anyone with access to your computer. When you first create an account on your operating system, or when an account is created for you by someone administering your computer, a password is created for you to access your account. You can change your password at any time, which you may want to do if you feel your password isn't strong enough, or that someone may have guessed your password. But what exactly makes for a strong password? Conventional wisdom often suggests these guidelines. Your password should be at least eight characters in

length. Short passwords are easier to guess. It should be a combination of letters, numbers, and symbols. There should be at

least one capital letter, and you'll want to avoid making it the first letter, as that's a pretty common practice. You also want to have at least one number and at least one symbol. Exclamation points and hashtags are pretty common, though, so try lesser-used symbols like the greater or lesser than symbol or a comma. Also avoid using dates, numbers, or names people know or can find out are associated with you, at least as the only part of the password. So don't use your birth date or your dog's name or your maiden name, for example. Lastly, avoid writing down your password on paper. If you have to write it down, keep it physically secure or locked away, and not just sitting next to your computer. Now with that said, how do you create a secure password that you can remember? There are different schools of thought on this. One suggestion is to think of a short phrase that has meaning to you, but not a direct connection. For example, "four score and seven years ago". To make that into a password, I could change it to 4s&7Ya. So in this case, the 4 represents four, the lowercase S stands for score, the ampersand stands for the and, which also has the benefit of being a less commonly used symbol, the 7 for the seven, the Y for the year, which I capitalized in this case, and the A for ago. So this is a fairly secure password with a key phrase that you can keep in your head without writing it down. Now, it doesn't have at least eight characters, so I might add some symbols I'll easily remember before and after the phrase. Now, alternately, you can think of

your password as a pass phrase, and come up with a sentence comprised of at least four to five words. For example, MyDogMaxIsSuperKeen! Or BiscottiGoesGreatWithCaramelCoffee!! Even though both of those examples go against the suggestion of not using exclamation points as your special character, and neither of them include numbers, they're both long enough that they'd be very difficult for someone to guess, unless they're phrases you often say out loud. Now, a powerful computer might be able to guess these passwords given enough time, but most systems lock you out after you exceed a reasonable number of password attempts, usually around 10 attempts. So passwords should be complex, but they also need to be memorable so you can enter them relatively easy when you need to log in. Be sure to take some time to develop your own strong password for your login information on your computer.

The security settings on your computer

Modern desktop operating systems have built-in features to help protect your computer from being compromised by problems like viruses and hackers. There's always more you can do to ensure the security of your data, but at the bare minimum, you should check that the basic security features of your computer are enabled. For example, here in Windows 10, we can go to our System Control Panel by typing control panel in the Cortana search field, selecting it here. And from here we can select System and Security. Here you'll find Windows Defender Firewall, which is a built-in service that helps protect your computer from unauthorized access over your network and over

the Internet. It can defend against malicious software and hackers that may attempt to gain access to your computer. Windows Defender should be enabled by default, but it's a good idea to make sure. Click its name and then click Turn Windows Defender firewall on or off. Make sure Turn on Windows Defender Firewall is enabled under both the private and public network settings areas. And also make sure that both instances have Notify me when Windows Defender Firewall blocks a new app are checked. This will have your system alert you if any application tries to gain access to your computer, so you can determine whether to allow it that access. Now, Windows 10 also includes built-in antivirus features. You can check and configure its settings by going to the Start Menu, to Settings, and then Update and Security. Here, select Windows Security, and click Virus and threat protection. By default, Windows periodically scans for viruses. But if you suspect your system may have been compromised by a virus, you can click on Scan Options to choose the level of scan you want to perform. And then click Scan Now to have Windows check for viruses. Again, both Windows Defender and Windows antivirus features are enabled by default, but it's still a good idea to check your own computer to make sure they're enabled and running.