What is a computer?

These days the term computer can refer to many different types of devices. We have desktop computers, laptop or notebook computers and mobile devices like tablets and phones are even considered computers. At the most basic level, a computer is an electronic device that you use to create, process, store, or retrieve different types of data and information. For example, you might create a word processing document on a desktop computer or browse the internet on a tablet device, or email photos from your mobile phone. All computers consist of two main parts, hardware and software. Software refers to the programs that run on the computer. Basically software programs are the parts of the computer you can't physically touch, like a word processing application, an email program and even the computer's operating system is software. Most computers come with built in software and you can install a virtually unlimited number of other software programs that you might want or need to use on your computer. Now, hardware refers to all the physical parts that make up a computer. For example, on a desktop computer, you have the main unit that contains the central parts like the CPU, the RAM or memory, and the hard drive. With desktop computers, you also need an external monitor, also called a display and devices for inputting information like a keyboard and a mouse. On computers like laptops, tablets, or mobile devices, the display is built into the device and they all generally have built in keyboards or, as is the

case with many tablets and mobile devices, the keyboard appears on screen when needed. Computer hardware can also refer to any number of accessories you can connect to the computer such as printers, scanners, speakers, and so on, which give additional functionality to the computer. So again, when we talk about computers at the most basic level, we're talking about an electronic machine comprised of various pieces of hardware on which you can operate various pieces of software.

What parts make up a computer?

When we use the term computer, we're usually referring to a collection of various hardware components that make up the computer as a whole. Even though there are many types of computers available today, they're all comprised of a similar set of primary hardware parts, like the base unit, the monitor, the keyboard, the mouse, and speakers. What we refer to as the base unit contains all the hardware components that are necessary for the computer to function. For example, this is where you'll find the hard drive, which is your computer's storage device. Kind of like the filing cabinet where everything on your computer is stored, from programs, to documents, to videos. Basically, anything that's stored on your computer is stored on the hard drive. You'll also find the RAM or memory in the base unit. Think of your computer's RAM as the desk in your office. In order to work with the files from my filing cabinet, I need to have space on my desk to pile and organize my files. The smaller the desk, the fewer the files and other items I can work

with at a time. Similarly, the less RAM you have, the fewer documents and applications it can have running at once on your computer. That's why RAM is one of the most common upgrades people have done to their computers. Also found the base unit is the CPU, or central processing unit. The CPU is the computer's brain. And it's the item that carries out all the functions of the computer, from processing instructions from the programs you're running to keeping the operating system working. The base unit is also where you'll find the various ports that allow you to connect additional hardware to your computer, like printers, external hard drives, and so on. For some computers, the base unit is a separate component. While on devices like laptop or tablet computers, all the items I mentioned, like the hard drive, the memory, and so on are built into the computer. Similarly on laptops and tablets, the monitor is built into the computer, while with other computers, the monitor is a separate device that you connect to the base unit. The monitor, sometimes referred to as the display, is what allows you to see what's being displayed by the computer, whatever that may be, from text documents, to videos, to photos. But to actually interact with and use a computer, you need a keyboard and a mouse. The keyboard lets you input text, numbers, and other characters into the applications you're using. And the mouse is a pointing device that allows you to operate the computer by pointing at and interacting with the elements that are on the screen. Again, on some computers, the keyboard and the mouse are separate devices that you need to connect to the base unit's ports in order to use them. On laptops, the keyboard

is built in. And most laptops generally use a pointing device called a track pad for moving the mouse cursor on the screen. On tablet devices, you generally don't use a mouse, but instead tap or slide your finger on the screen to interact with the device. And the keyboard is often virtual. Meaning it appears on screen when you need to input text or other characters. Other important hardware components that make up computers these days include speakers, which allow you to hear audio from the apps you're using. This could be music, or the soundtrack from a video you're watching, or what people are saying in a video conference. Without speakers, you won't be able to hear the sounds your computer is making. And similarly, you'll need a microphone if you want to be able to be heard through your computer, whether it's in a video conferencing app or other program where you may need to record your voice. Again, laptops and tablets usually have speakers and microphones built in, while other computers require you to connect external speakers and microphones. Now of course, there's a lot more that can make up a computer. But the components we covered here, the base unit, the monitor, the keyboard and mouse, and speakers and microphone, are the most essential parts needed to interact with and operate most of the apps you'll commonly use on your computer.

Understand types of computers

- As you know, computers come in many different forms from desktop computers to laptops, to tablets and mobile phones. These are sometimes referred to as personal computers to

distinguish them from other types of computers, like calculators, smart TVs, or gaming consoles, which are all technically computers too. Let's take a moment here to look at the different characteristics of the most common types of personal computers and the types of uses that are best suited for, a desktop computer is a computer that's designed to stay in one place, like your office work area or some other semi-permanent location in your home or office. Desktop computers are typically comprised of separate pieces for the base unit, the monitor, the keyboard, mouse and speakers. These separate pieces, as well as the fact that desktop computers have to be plugged into an electrical outlet, make them impractical for moving them from location to location. Laptop computers, on the other hand are computers that are designed to be portable and all the necessary parts to use the computer from the monitor, to the speakers, to the keyboard and track pad mouse are all contained in one device. Laptops are also battery powered, so you don't have to keep them plugged into an outlet to use them. Making them ideal for using in different areas of your home or on the road. Now, tablet computers are another type of portable computer, usually even smaller and lighter than laptops. Instead of having a physical keyboard and track pad, tablets are touch sensitive, meaning you tap and interact directly with the items on the screen with your fingers, or sometimes with a special pen called a stylus. And when you need to input text, a screen-based keyboard will appear. Like desktop and laptop computers, you can install software applications on tablets for work, but they're lightweight and size also makes them ideal for entertainment like for reading

electronic books or watching movies. And lastly, smartphones are another type of common personal computing device. That's small enough to be held in one hand. Like the other devices

we've looked at, you can install software on smartphones to accomplish all sorts of tasks. Although their size generally doesn't make them ideal for complicated work. Now, smartphones connect to mobile networks to let you make phone calls, but this connection also gives you access to the internet, making it possible to communicate with others, access your email, share files, and perform a variety of other online tasks that other personal computers typically require a wifi internet connection to accomplish. So depending on your needs, you may find yourself using one or a combination of these types of personal computing devices to get things done.

Add external storage to a computer

- Another common device you'll most likely use at some point or another is an external hard drive or storage device. An external drive can be a simple flash or thumb drive like this one. These typically plug into your computer's USB port, and you can get them in a variety of capacities depending on how much storage space you need. But for significantly more storage space, you'll have to go with an external hard drive like this one. These can also connect to your computer via USB. You'll do need to be aware of the type of USB connector that the drive uses though. Many drives still use the older standard USB connector while newer drives use what's known as USB-C. You'll have to make

sure that drives connector is compatible with the USB ports on your computer. If they're not compatible, you'll need an adapter or a different drive. Larger external drives often require that you plug them into their own power outlet as well. Although you will find some models that are powered through the USB port. But using an external hard drive or a thumb drive is simply a matter of plugging it into your computer. After a moment, you should see an alert appear to determine what to do with the external drive. I'll click that alert. And basically windows is asking what you want to do with this storage device as detected. To view the contents of the drive, choose Open folder to view files. And now we're seeing the contents of the drive I plugged into my PC. Now, if the AutoPlay window didn't show up, your preferences might have been changed. To check your preferences, go to the Start menu, Settings, select Devices, and select AutoPlay. And here makes sure Use AutoPlay for all media and devices is switched on.

Connect to Bluetooth devices

- Many of today's computers, especially portable devices, like laptops and tablet computers, include a technology called Bluetooth. Bluetooth is a short range wireless technology, mostly used to reduce the use of cables. You're probably familiar with this technology in the form of Bluetooth headsets that many people use to talk on their mobile phones. But Bluetooth is also used for many other types of devices, like replacing a wired

keyboard or mouse to eliminate the clutter of cables normally needed to connect those devices to your computer. Now, because we are dealing with a wireless technology, the important thing is to make sure that your Bluetooth device such as a mouse and your computer recognize each other and that someone nearby can't take control of your computer with their Bluetooth mouse. You accomplish this by performing a task called pairing your devices. So let's take a look at how we do this. For this example, I'm going to set up a Bluetooth mouse. The first thing you need to do is to set your Bluetooth device into pairing mode also called discoverable mode. You'll have to check the instructions for whatever device you're trying to pair with your computer to see how to put it into this mode. I'll go ahead and do that to my mouse right now. Now, you may immediately see a notification letting you know that your device was detected, and you'll be able to connect to it right from there. If you don't see that notification or you miss clicking it, you can go into settings to connect your device. Here in Windows 10, I'm going to go to the Start menu, to Settings, Devices, and I'll make sure that Bluetooth and other devices is selected. I'll make sure that the Bluetooth switch is on, and I'll click Add Bluetooth or other device. I'll say that I want to connect a Bluetooth device. And after a moment, my mouse's name appears in this window. I can select it, and Windows will just take a moment to install the device. Now, depending on your device, you might be prompted to type in a passcode in order to complete the pairing process. This is an extra security measure some devices use to make sure the person controlling the computer is the one who wants to pair

with the device. If your device requires a passcode, you'll find the code in your instruction manual. But as you just saw, that wasn't required for this mouse, and after a few seconds, I got this message saying my device is ready to go. I'll click Done. I see my device listed here, and I can begin using my mouse right away. Now, you only need to set up your Bluetooth device once. After that, anytime your Bluetooth mouse, keyboard, or any other paired device is switched on near your computer, they should automatically connect. Now, if you ever want to unpair your mouse from your PC, just come back into Bluetooth settings, select the device, click Remove Device and confirm that you want to do that. You can see it's been removed and now this mouse will no longer work with my computer until I pair them again. And that's it. This pairing process is pretty much the same regardless of the type of device you're using. Just put your device into pairing or discoverable mode, open up Bluetooth settings, select your device, and let windows do the rest.