

### UNIT 3. The Operating Systems

An **operating system** is the core set of **software** on a device that keeps everything together. Operating systems communicate with the device's hardware. They handle everything from your **keyboard** and **computer mouse** to the **Wi-Fi** radio, **storage devices**, and **display**. **In other words**, an operating system handles input and output devices. **In addition**, operating systems use device drivers written by hardware creators to communicate with their devices.

Common **desktop** operating systems include **Windows**, **OS X**, and **Linux**. **While** each OS is different, most provide a graphical user **interface**, or **GUI**, that includes a desktop and the ability to manage files and folders. They **also** allow you to install and run programs written for the operating system. Windows and Linux can be installed on standard **PC** hardware, while OS X is designed to run on Apple systems. **Therefore**, the hardware you choose affects what operating system you can run.

Mobile devices, such as tablets and smartphones also include operating systems that provide a GUI and can run **applications**. Common mobile OSes include Android, iOS, and Windows Phone. **These** OSes are developed specifically for **portable** devices and therefore are designed around touchscreen input. While early mobile operating systems lacked many features found in desktop OSes, they now include advanced capabilities, such as the ability to run third-party apps and run multiple apps at once.

Operating systems also include other software, **including** a user interface that lets people interface with the device. This may be a **desktop** interface on a PC, a **touchscreen** interface on a phone, or a voice interface on a digital assistant device.

When software developers create applications, they must write and compile them for a specific operating system. **This is because** each OS communicates with the **hardware** differently and has a specific application program interface, or **API**, that the programmer must use. While many popular programs are cross platform, meaning they have been

developed for multiple OSes, some are only available for a single operating system.

Therefore, when choosing a computer, make sure the operating system supports the programs you want to run.

In conclusion, I want to say that, without the invention of the operating system, computers would not have nearly the amount of power, diversity, and applicability they do today.