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There are a few types of memory we should know about before we discuss the differences in non-volatile memory in embedded systems vs desktops. Volatile memory is memory that maintains its data only while the device has power, once that power is lost the data is also lost. Non-volatile memory is memory that keeps its data even if the device loses power. Embedded systems are typically used for a small list of features if not just one. For instance, a vending machine, coffee maker, or even a toaster oven. These all only need so many lines of code to work properly the way we intend them to. Whereas a desktop needs to have the ability to run several applications and an operating system. Desktops use Non-volatile memory for things such as the operating system.

Embedded systems are small computers that are inserted into a device that helps consumers in day-to-day life. This can be things as mentioned earlier or something like a pacemaker. Embedded systems use microcontrollers to store data because they can be very small and fit in smaller products. Whereas desktop systems are smaller than they have ever been, but they still have some size to them. Embedded systems do not need a user to interact with them whereas a desktop does to get it to work.

Embedded systems are better to use in certain applications over desktops. When we are looking to do a certain task such as the vending machine, coffee maker, toaster oven and pacemaker it is better for space, speed of process as well as cost to use embedded systems. Embedded systems are also very steady and reliable since they only have a small number of tasks to run.