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**Week 11 Paper**

The process of serialization works by turning an object or data structure into a stream of bytes, which then allows us to easily transmit it somewhere else or save it to our HDD. Serialization can be used to transfer data over networks, save objects to physical files and much more. Serialization comes with its own set of advantages and disadvantages. Some advantages of using serialization include the ability to compress and encrypt the byte stream, deserialization is faster than creating an object from a class saving us time, and the readily available use of deserialization makes retrieving that data whenever needed very useful. One big disadvantage of serialization comes in the fact that it disrupts the hiddenness of abstract data types allowing private implementation details to possibly be viewed. Serialization also scales it’s memory requirements exponentially as bigger sized objects are passed through, due to its significant overhead. One example of when we can use serialization is while playing video games with a save game option. Serialization allows us to save the current state of the game to our disk, or in the case of newer online games to a cloud server.