**Serialization**

Serialization is the process of converting the state information of a data object i.e., a combination of data and code present in a region of storage into binary or textual form so that its state can be saved in the network/medium or be transported to another network (Techopedia, 2011). Serialization has many advantages such as it is easy to use and can be customized as required. The serialized bytes provide security as they can be encrypted, compressed, and authenticated as required. Furthermore, they can be used to transport the object through a network or just save its current state in the network.

However, like all things in nature, it also has its disadvantages. Serialized file are known to cause large overhead because of the resource overhead of both the CPU and the IO devices so it should not be used for large-sized objects because it would to too slow (Malik, 2013). The other disadvantage of serialization is that the serialization interface does not provide any transaction control mechanism, so it is not suitable for use within applications that require concurrent access without using any external APIs. Finally, for certain form of serialization such as XML serialization, it only works on public classes but not on private or internal classes which might compel the developer to make all classes public which is a bad practice (Kanjilal, 2006).

To best use case of serialization would be when we need to convert an object into a stream of bytes that can be saved in a physical file that then can be saved on the device or shared over the network. Also, we only use it when file is relatively smaller as one of its disadvantages is that it is too slow for large files.

References

Techopedia. (2011, December 16). *What is serialization? - definition from Techopedia*. Techopedia.com. Retrieved March 30, 2022, from <https://www.techopedia.com/definition/867/serialization-net>

Hazelcast. (2022). *Serialization*. Hazelcast. Retrieved March 30, 2022, from https://hazelcast.com/glossary/serialization/

Malik, R. (2013). *What is advantage and disadvantage of serialization*. www.javatpoint.com. Retrieved March 30, 2022, from https://www.javatpoint.com/q/1940/what-is-advantage-and-disadvantage-of-serialization

Kanjilal, J. (2006). *Introducing Serialization in .NET*. Introducing serialization in .NET: ASP alliance. Retrieved March 30, 2022, from http://aspalliance.com/983\_Introducing\_Serialization\_in\_NET.3