**JSON Serialization**

This was my assigned topic this week in our group presentations. I greatly enjoyed understanding this topic, as I had recently been exposed to JSON this past Christmas while participating in the Advent of Code challenges. I started with the link provided in the class topics at the following link:

<http://www.w3schools.com/json/default.asp>

It explained that JSON is just a format for storing and exchanging data. It was very simple to understand and has some very simple rules to follow. I then found a few YouTube videos that helped me understand the process of serialization to and from JSON.

<https://www.youtube.com/watch?v=vBkuLu-ycEc>

<https://www.youtube.com/watch?v=WWa0cg_xMC8>

I was then able to research more on how to serialize to and from JSON by researching examples on StackOverflow.com. Many of the examples provided used the Google GSON library which was very easy to understand and use. In my coding example that I have attached below only utilizes the toJson and fromJson methods from the GSON class type. This application creates a class called Vehicle and instantiates two instances of Vehicle named vehicle1 and vehicle2. It then changes the data to JSON and saves it to a file. With that completed, I wanted to see how easy it was to pull it in from a file, so the rest of the application reads the data from the file, converts it back to a Vehicle object and displays it’s data.

<https://github.com/hodges-olan/CIT360-Portfolio/tree/master/CIT360-Portfolio/src/JSONSerialization>

You can see me teaching the group about JSON as well as Java serialization in the following YouTube clip. The clip takes you to the point in time where I start talking.

**Hibernate**

<https://en.wikipedia.org/wiki/Singleton_pattern>

<https://en.wikipedia.org/wiki/Proxy_pattern>

<https://en.wikipedia.org/wiki/Factory_method_pattern>

<https://docs.jboss.org/hibernate/orm/3.3/reference/en-US/html/queryhql.html>

<https://en.wikipedia.org/wiki/Many-to-many_%28data_model%29>

<http://www.tomjewett.com/dbdesign/dbdesign.php?page=manymany.php>

<http://docs.jboss.org/ejb3/app-server/HibernateAnnotations/reference/en/pdf/hibernate_annotations.pdf>

<https://sqllyw.wordpress.com/2009/05/27/hibernate-annotations-and-entity-relations/>

<https://josian.wordpress.com/2006/09/09/hibernate-annotations-bidirectional-one-to-many/>

**Threads, Executors, Runnables, Handlers**