Game Server Libraries

This document lists the libraries used for the game server, what they do and why they are used.

### Java Websocket

**Website/documentation:** <https://github.com/TooTallNate/Java-WebSocket>

**File names (including dependencies):**

* java-WebSocket-1.3.7.jar

**What it does:**

Implements a barebones WebSocket protocol server and client.

**Why it is used:**

The server part of the library is used to make a connection with the client on which we can send and received messages.

### MySQL Connector

**Website/documentation:** <https://dev.mysql.com/doc/connector-j/5.1/en/>

**File names (including dependencies):**

* mysql-connector-java-5.1.45-bin.jar

**What it does:**

Implements the MySQL protocol to simplify querying on the database.

**Why it is used:**

To exchange data with the database about both content and authentication.

### Gson

**Website/documentation:** <https://github.com/google/gson>

**File names (including dependencies):**

* gson-2.6.2.jar
* junit-4.12.jar

**What it does:**

Library to converts JSON to Java objects and vice versa.

**Why it is used:**

To convert the responses from the Haskell backend to a more suitable format and to load the settings of the server.

### Nashorn

**Website/documentation:** <https://docs.oracle.com/javase/8/docs/technotes/guides/scripting/nashorn/>

**File names (including dependencies):**

* nashorn.jar

**What it does:**

A JavaScript engine to run JavaScript from Java, including parameter conversion.

**Why it is used:**

To have the adaptive difficulty options and setup in an external script for easy modification without the need to recompile or reset the server.

## The following libraries are for testing purposes:

### JUnit (version 4)

**Website/documentation:** <https://junit.org/junit4/>

**File names (including dependencies):**

* junit-4.12.jar
* hamcrest-core-1.3.jar

**What it does/Why it is used:**

A framework to write tests. Used to write both unit and integration tests.

### Mockito

**Website/documentation:** <http://site.mockito.org/>

**File names (including dependencies):**

* mockito-core-2.8.9.jar
* byte-buddy-1.6.14.jar
* byte-buddy-agent-1.6.14.jar
* objenesis-2.5.jar
* **Extends on JUnit**

**What it does/Why it is used:**

A framework that allows the creation of mock objects. These mock objects can be used to both mock methods and to verify if a method has been called. Used to write unit tests.