Test Plan
Blizzard Test Engineer Interview

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1. Scope
This test checks the integrity of the WoW Web API's Items, specifically those that are classified as weapons. This test checks the consistency of the data stored about a weapon.

This test does not check the integrity of any other information stored in an Item.

2. Test Strategy
This test will test all Items up to id 96940. It will query the WoW Web API to retrieve each item and perform the following tests on it.

After retrieving an Item, the test will check if it contains weapon damage data. If it does not, the test will move on to the next item. If it does, the test will first check that the weapon contains all necessary data, including DPS, weapon speed, minimum damage, exact minimum damage, maximum damage, and exact maximum damage. Next, the test will check that minimum damage is equivalent to exact minimum damage, and maximum damage is equivalent to exact maximum damage. Finally, the test will check that the following formula for damage calculation is true:

*dps * weaponSpeed == (exactMin + exactMax) / 2*

3. Entry and Exit Criteria
This test should be run on any new item added to the Item section of the Web API. This test should be run if any changes are made to an item in the Web API.

This test is unnecessary if no changes have been made to previously verified Items. This test is unnecessary if it is already known that the item being tested is not a weapon.

4. Test Cases
- After retrieving a given Item with weapon data (i.e. has a "weaponInfo" object), verify that the "weaponInfo" object contains a "dps" value, a "weaponSpeed" value, and a "damage" object; also verify that the "weaponInfo" object contains no more than 3 values.
- After retrieving a given Item with weapon data, verify that the "damage" object contains an "exactMin" value, an "exactMax" value, a "min" value, and a "max" value; also verify that the "damage" object contains no more than 4 values.

- After retrieving a given Item with weapon data, verify that the "min" value is equivalent to the "exactMin" value. This will be calculated by rounding the "exactMin" value to the nearest whole number and comparing it to the "min" value.
- After retrieving a given Item with weapon data, verify that the "max" value is equivalent to the "exactMax" value. This will be calculated by rounding the "exactMax" value to the nearest whole number and comparing it to the "max" value.
- After retrieving a given Item with weapon data, verify that the product of "dps" and "weaponSpeed" equals the average of "exactMax" and "exactMin", rounded to the nearest hundredth place.

5. Dependencies

This program will not work without internet connection and access to the WoW Web API. No other known significant constraints.

This program requires Java 7 and the jar file org.json-20 120 521, and was compiled in Eclipse Juno.