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**Test cases (rules and equivalency partitions)**

1. **Test for Player class**

|  |  |  |
| --- | --- | --- |
| **Rules/Constraints** | **Valid Equivalence Classes** | **Invalid Equivalence Classes** |
| Name contains Characters (A-Z) | Contains only characters (A-Z) | Has others (1, !, \_) |
| numberGamesPlayed is an integer | 5 | Is another datatype (‘abc’, 10.00, “abc”) |
| numberGamesWon is an integer | 3 | Is another datatype (‘abc’, 10.00, “abc”) |
| numberGamesPlayed is a positive integer (0-unlimited) | 0  10 | -10 |
| numberGamesWon is a positive integer (0-unlimited) | 0  10 | -10 |

1. **Test for Scoreboard Class**

|  |  |  |
| --- | --- | --- |
| **Rules/Constraints** | **Valid Equivalence Classes** | **Invalid Equivalence Classes** |
| doublyLinkedList of Players contains Player objects | DLNode element: Player | Other datatype:  DLNode element: “Avet”  DLNode element: ‘A’  DLNode element: 3  DLNode element: 3.5 |
| numPlayers is an integer | 3 | Other datatype (“3”, ‘3’, 3.34) |
| numPlayers is positive (0-unlimited) | 3 | -1 |

1. **Test for Dictionary Class**

|  |  |  |
| --- | --- | --- |
| **Rules/Constraints** | **Valid Equivalence Classes** | **Invalid Equivalence Classes** |
| Input word length (has 1-20 characters) | 1 chars  10 chars  20 chars | 0 chars  21 chars |

1. **Test for Dictionary Class**

|  |  |  |
| --- | --- | --- |
| **Rules/Constraints** | **Valid Equivalence Classes** | **Invalid Equivalence Classes** |
| Input word length (has 1-20 characters) | 1 chars  10 chars  20 chars | 0 chars  21 chars |
| Input word characters (a-z) | e | Has other (1, $, \_) |

**Class Diagram for Hangman Game**

Diagram

Description automatically generated