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420-G30

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Milestone 2 : Test Cases and Class Design

**Test Cases**

Player

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| --- | --- | --- |
| **Rules** | **Valid Equivalent Classes** | **Invalid Equivalent Classes** |
| Constructor must set numGamesPlayed and numGamesWon to defaults and name to its value. |  |  |
| If incremented, numGamesPlayed should return the correct value. | 1. numGamesPlayed is incremented | 1. numGamesPlayed is not incremented |
| If incremented, numGamesWon should return the correct value. | 1. numGamesWon is incremented. | 1. numGamesWon is not incremented |

Scoreboard

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| --- | --- | --- |
| **Rules** | **Valid Equivalent Classes** | **Invalid Equivalent Classes** |
| The default constructor should not add any player and should set the number of players to 0. | 1. List length is 0 | 1. List length is more than 0 |
| The addPlayer method should add players to the doubly list of players. (boundary test) | 1. Player object | 1. Null 2. Not Player object |
| The gamePlayed method must increment a player’s games played and games won (if games won) | 1. Valid player name    1. A win (true)    2. A lost (false) | 1. Invalid player name |
| The getNextPlayer must return the player at the index mentioned. | 1. Empty list   7.1 null   1. List of 1    1. Index 0 2. List of 3    1. Index 0    2. Index 2 | 1. Empty list   9.1 Index 0   1. List of 1   11.1 Index 1   1. List of 3    1. Index -1    2. Index 3 |

Dictionary

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| --- | --- | --- |
| **Rules** | **Valid Equivalent Classes** | **Invalid Equivalent Classes** |
| The words must fit the length requirements. | 1. Word that is exactly the minimum requirement. 2. Word that is exactly the maximum length requirement 3. Word that is within the requirement | 1. Word that is too small 2. Word that is too big. |
| The words must only contain letters (guessable characters) | 1. Word that only contains letters 2. Words that contain white spaces | 1. Word that contains numbers 2. Word that contains symbols (use %) |
| The readInList’s parameter must be the word bank file location | 1. The correct file location and name | 1. An incorrect file name |

Game

|  |  |  |
| --- | --- | --- |
| **Rules** | **Valid Equivalent Classes** | **Invalid Equivalent Classes** |
| The constructor must set the word to the value added | 1. Constructor with a (valid) word | 1. Constructor without a word |
| The addLetter method adds each letter to a singly linked list | 1. The number of letters in the word | 1. The number of letters in the word - 1 |
| The isLetterInWord must return if the letter is in the word | 1. A lower-case letter that is in the word 2. An upper-case letter that is in the word | 1. A letter that is not in the word |
| The isLetterInWord must only accept a single letter | 1. A single letter | 1. More than one letters 2. A symbol (use %) 3. A number |

**Class Design**

Timeline

Description automatically generated