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| **Rules/Constraints** | **Valid Equivalence Classes** | **Invalid Equivalence Classes** |
| Words read in from the text file must be greater than 1 or less than 21 | 2-20 | <= 0  >20 |
| Words read in must have letters only | A-Z | 0-9 |
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| **Operation** | **Purpose** | **Object State** | **Expected Result** |
| Method/invocation | The role the operation plays in the test case. Why do this? | The expected state of the test object once the operation is complete. | The expected output (if any). |
| New Player(“Tyler”) | Test if the variables are set properly | Name= “Tyler”  NumWins =0  NumGamesPlayed = 0 | Created object |
| getPlayerName() |  | Name= “Tyler”  NumWins =0  NumGamesPlayed = 0 | 0 |
| addWin() | Adds a win, which incidentally adds a game played | Name= “Tyler”  NumWins =1  NumGamesPlayed = 1 | +1 to wins and games played |
| addGamePlayed() | Adds only a game played | Name= “Tyler”  NumWins =1  NumGamesPlayed = 2 | +1 to game played only |
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| New Dictionary() | Creates new dictionary and runs createDictionary in the constructor |  |  |
| createDictionary() | Reads in from the text file, worders greater length than 0 and less than 21 | wordsList.length() = 45 |  |
| removeWord() | Removes a word from the list once completed | wordsList.length() = 44 |  |
| getWord() | Retrieves a random word from the list | wordsList.length() = 44 | Random word every time |
|  |  |  |  |
| New ScoreBoard() |  | Players.length() = 0; | Creates a new scoreboard, the players linked list is empty |
| addPlayer(player) | Adds a player to the list in alphabetical order of last name | Players.length() = 1; |  |
| getPlayer().find(0).getElement().getPlayerName | Gets the first player’s name from the players list | Players.length() = 1; | Returns “Tyler” |
|  |  |  |  |
| New HangmanGame() |  |  |  |
| setWord() | Retrieves a word form the dictionary and extracts the letters into the currentWordList | currentWordList.length() = 7;  falseCount = 0;  correctCount = 0;  guessedLetterList length = 0; | Current word is “Infarction” |
| getHint() |  | currentWordList.length() = 7;  falseCount = 0;  correctCount = 1;  guessedLetterList length = 1; | Gives hint of o |
| guessLetter(‘n’) |  | currentWordList.length() = 7;  falseCount = 0;  correctCount = 3;  guessedLetterList length = 2; |  |
| guessLetter(‘z’) |  | currentWordList.length() = 7;  falseCount = 1;  correctCount = 1;  guessedLetterList length = 3; |  |
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