**Test Reference:**

|  |  |
| --- | --- |
| /\*\* |  |
|  | \* updating bonuses\_used for a word in the valid\_word\_table |
|  | \* |
|  | \* @param updateWord |
|  | \* the word that needs an update on its bonuses\_used value |
|  | \* @param newValue |
|  | \* the new value needs to be updated |
|  | \* @return true if operation is successful, false if word doesn't exist; |
|  | \* null if database error |
|  | \*/ |

**Equivalent Classes:**

|  |  |  |
| --- | --- | --- |
|  | **Valid** | **Invalid** |
| **tname** | * **1.1 -** “gold” literal * **1.2 -** “green” literal * **1.3** - “GOld” mix of upper and lowercase letters * **1.4** - “GrEen” mix of upper and lowercase letters * **1.5** - “GOLD” literal * **1.6** - “GREEN” literal | * **1.a -** null * **1.b -** empty string * **1.c -** string with 1 character * **1.d -** integer type |
| **tnname** | * **2.1 -** “gold” literal * **2.2 -** “green” literal * **2.3** - “GOld” mix of upper and lowercase letters * **2.4** - “GrEen” mix of upper and lowercase letters * **2.5** - “GOLD” literal * **2.6** - “GREEN” literal | * **2.a -** null * **2.b -** empty string * **2.c -** string with 1 character * **2.d -** integer type |

**Class Representatives:**

|  |  |
| --- | --- |
| Equivalence Class | Representative |
| 1.1 | “gold” |
| 1.2 | “green” |
| 1.3 | “GoLd” |
| 1.4 | “GreeN” |
| 1.5 | “GOLD” |
| 1.6 | “GREEN” |
| 1.a | null |
| 1.b | “” |
| 1.c | “c” |
| 1.d | 79 |
| 2.1 | 1 |
| 2.2 | 33 |
| 2.3 | 2147483647 |
| 2.4 | 0 |
| 2.5 | null |
| 2.6 | -33 |
| 2.a | null |
| 2.b | “” |
| 2.c | “c” |
| 2.d | 79 |

**Representative Boundaries:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Equiv. Class** | **Representative** | **Lower Boundary** | **Upper Boundary** |
| 1.1 | “gold” | “gol” | “goldd” |
| 1.2 | “green” | “gree” | “greenn” |
| 1.3 | “GoLd” | “goL” | “goLdd” |
| 1.4 | “GreeN” | “GreE” | “GreEnn” |
| 1.5 | “GOLD” | “GOL” | “GOLDD” |
| 1.6 | “GREEN” | “GREE” | “GREENN” |
| 1.a | null | - | - |
| 1.b | “” | - | “c” |
| 1.c | “c” | “” | “cc” |
| 1.d | 79 | 78 | 80 |
| 2.1 | 1 | “gol” | “goldd” |
| 2.2 | 33 | “gree” | “greenn” |
| 2.3 | 2147483647 | “goL” | “goLdd” |
| 2.4 | 0 | “GreE” | “GreEnn” |
| 2.5 | null | “GOL” | “GOLDD” |
| 2.6 | -33 | “GREE” | “GREENN” |
| 2.a | null | - | - |
| 2.b | “” | - | “c” |
| 2.c | “c” | “” | “cc” |
| 2.d | 79 | 78 | 80 |

**Test Cases:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test ID** | **tname** | **tnname** | **Eq. Class** | **Expected Output** |
| t\_0 | “gold” | “GREEN” | 1.1, 2.6 |  |
| t\_1 | “green” | “GOLD” | 1.2, 2.5 |  |
| t\_2 | “GoLd” | “GreeN” | 1.3, 2.4 |  |
| t\_3 | “GreeN” | “gold” | 1.4, 2.1 |  |
| t\_4 | “GOLD” | “green” | 1.5, 2.2 |  |
| t\_5 | “GREEN” | “GoLd” | 1.6, 2.3 |  |
| t\_6 | null | “green” | 1.a | ERROR |
| t\_7 | “” | “green” | 1.b | ERROR |
| t\_8 | “c” | “green” | 1.c | ERROR |
| t\_9 | 79 | “green” | 1.d | ERROR |
| t\_10 | “green” | null | 2.a | ERROR |
| t\_11 | “green” | “” | 2.b | ERROR |
| t\_12 | “green” | “c” | 2.c | ERROR |
| t\_13 | “green” | 79 | 2.d | ERROR |
| t\_14 | “gol” | “green” | 1.1 |  |
| t\_15 | “goldd” | “green” | 1.1 |  |
| t\_16 | “gree” | “green” | 1.2 |  |
| t\_17 | “greenn” | “green” | 1.2 |  |
| t\_18 | “goL” | “green” | 1.3 |  |
| t\_19 | “goLdd” | “green” | 1.3 |  |
| t\_20 | “GreE” | “green” | 1.4 |  |
| t\_21 | “GreEnn” | “green” | 1.4 |  |
| t\_22 | “GOL” | “green” | 1.5 |  |
| t\_23 | “GOLDD” | “green” | 1.5 |  |
| t\_24 | “GREE” | “green” | 1.6 |  |
| t\_25 | “GREENN” | “green” | 1.6 |  |
| t\_26 | “cc” | “green” | 1.c | ERROR |
| t\_27 | 78 | “green” | 1.d | ERROR |
| t\_28 | 80 | “green” | 1.d | ERROR |
| t\_29 | “green” | “gol” | 2.1 |  |
| t\_30 | “green” | “goldd” | 2.1 |  |
| t\_31 | “green” | “gree” | 2.2 |  |
| t\_32 | “green” | “greenn” | 2.2 |  |
| t\_33 | “green” | “goL” | 2.3 |  |
| t\_34 | “green” | “goLdd” | 2.3 |  |
| t\_35 | “green” | “GreE” | 2.4 |  |
| t\_36 | “green” | “GreEnn” | 2.4 |  |
| t\_37 | “green” | “GOL” | 2.5 |  |
| t\_38 | “green” | “GOLDD” | 2.5 |  |
| t\_39 | “green” | “GREE” | 2.6 |  |
| t\_40 | “green” | “GREENN” | 2.6 |  |
| t\_41 | “green” | “cc” | 2.c | ERROR |
| t\_42 | “green” | 78 | 2.d | ERROR |
| t\_43 | “green” | 80 | 2.d | ERROR |