**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** |
| **updateWord** | * **1.1 -** string composed of permissible characters that abides by the length requirements * **1.2 -** uppercase word | * **1.a -** non-encoded characters * **1.b -** empty string * **1.c -** single char * **1.d -** integer type * **1.e -** >11 lettered word * **1.f -** null |
| **newValue** | * **2.1 -** {x | x ≥ 0 and x ≤ MAX\_POINTS\_PER\_WORD and x is an integer} * **2.2** - 0 * **2.3** - 1 * **2.4 -** MAX\_POINTS\_PER\_WORD | * **2.a -** {x | x < 0 } * **2.b -** float/double type * **2.c -** x > INT\_MAX * **2.d -** null |

**Equivalence Classes:**

|  |  |
| --- | --- |
| Equivalence Class | Representative |
| 1.1 | “cat” |
| 1.2 | “DOG” |
| 1.a | “典Josephus” |
| 1.b | “” |
| 1.c | “a” |
| 1.d | 78 |
| 1.e | “JosephusJosephus” |
| 1.f | null |
| 2.1 | 1 |
| 2.2 | 33 |
| 2.3 | 2147483647 |
| 2.4 | null |
| 2.a | -33 |
| 2.b | 0 |
| 2.c | -1 |
| 2.d | -2147483648 |

**Representative Boundaries:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Equiv. Class** | **Representative** | **Lower Boundary** | **Upper Boundary** |
| 1.1 | “cat” | “ca” | “catt” |
| 1.2 | “DOG” | “DO” | “DOGG” |
| 1.a | “典Josephus” | “典Josephu” | “典Josephuss” |
| 1.b | “” | - | “a” |
| 1.c | “a” | “” | “aa” |
| 1.d | 78 | 77 | 79 |
| 1.e | “JosephusJosephus” | “JosephusJosephu” | “JosephusJosephuss” |
| 1.f | null | - | - |
| 2.1 | 1 | 0 | 2 |
| 2.2 | 33 | 32 | 34 |
| 2.3 | 2147483647 | 2147483646 | 2147483648 |
| 2.4 | 0 | -1 | 1 |
| 2.a | null | - | - |
| 2.b | -33 | -34 | -32 |
| 2.c | -1 | -2 | 0 |
| 2.d | -2147483648 | -2147483649 | -2147483647 |

**Test Cases:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test ID** | **updateWord** | **newValue** | **Eq. Class** | **Expected Output** |
| t\_0 | “cat” | 1 | 1.1, 2.1 |  |
| t\_1 | “DOG” | 33 | 1.2, 2.2 |  |
| t\_2 | “典Josephus” | 33 | 1.a | ERROR |
| t\_3 | “” | 33 | 1.b | ERROR |
| t\_4 | “a” | 33 | 1.c | ERROR |
| t\_5 | 78 | 33 | 1.d | ERROR |
| t\_6 | “JosephusJosephus” | 33 | 1.e | ERROR |
| t\_7 | null | 33 | 1.f | ERROR |
| t\_8 | “cat” | 2147483647 | 2.4 |  |
| t\_9 | “cat” | null | 2.d | ERROR |
| t\_10 | “cat” | -33 | 2.a | ERROR |
| t\_11 | “cat” | 0 | 2.3 |  |
| t\_12 | “cat” | -1 | 2.b | ERROR |
| t\_13 | “cat” | -2147483648 | 2.c | ERROR |
| t\_14 | “ca” | 33 | 1.1 |  |
| t\_15 | “catt” | 33 | 1.1 |  |
| t\_16 | “DO” | 33 | 1.2 |  |
| t\_17 | “DOGG” | 33 | 1.2 |  |
| t\_18 | “典Josephu” | 33 | 1.a | ERROR |
| t\_19 | “典Josephuss” | 33 | 1.a | ERROR |
| t\_20 | “aa” | 33 | 1.c | ERROR |
| t\_21 | 77 | 33 | 1.e | ERROR |
| t\_22 | 79 | 33 | 1.e | ERROR |
| t\_23 | “JosephusJosephu” | 33 | 1.f | ERROR |
| t\_24 | “JosephusJosephuss” | 33 | 1.f | ERROR |
| t\_25 | “cat” | 2147483646 | 2.4 |  |
| t\_26 | “cat” | 2147483648 | 2.4 |  |
| t\_27 | “cat” | -34 | 2.b | ERROR |
| t\_28 | “cat” | -32 | 2.b | ERROR |
| t\_29 | “cat” | -2 | 2.c | ERROR |
| t\_30 | “cat” | -2147483649 | 2.d | ERROR |
| t\_31 | “cat” | -2147483647 | 2.d | ERROR |