**Test Reference:**

|  |  |
| --- | --- |
| /\*\* |  |
|  | \* Checks to see if the word a player played is a new longest for them, or a |
|  | \* new highest word score, updates it if it is tied for longest or longer |
|  | \* |
|  | \* @param uname |
|  | \* the user to update |
|  | \* @param word |
|  | \* the word played |
|  | \* @param points |
|  | \* the point value of that word |
|  | \*/ |

**Equivalent Classes:**

|  |  |  |
| --- | --- | --- |
|  | **Valid** | **Invalid** |
| **uname** | * **1.1 -** string composed of permissible characters that abides by the length requirements | * **1.a -** non-encoded characters * **1.b -** empty string * **1.c -** single char * **1.d -** integer type * **1.e -** valid characters, out of bounds * **1.f -** null |
| **word** | * **2.1 -** string composed of permissible characters that abides by the length requirements * **2.2 -** uppercase word | * **2.a -** non-encoded characters * **2.b -** empty string * **2.c -** single char * **2.d -** integer type * **2.e -** >11 lettered word * **2.f -** null |
| **points** | * **3.1** - 1 * **3.2** - {x | x > 0 and x < 2147483647 } * **3.3** - 2147483647 * **3.4** - 0 | * **3.a -** null * **3.b -**  {x | x < 0 and x > -2147483648 } * **3.c -** -1 * **3.d -**  -2147483648 |

**Class Representatives:**

|  |  |
| --- | --- |
| Equivalence Class | Representative |
| 1.1 | “tenbergen” |
| 1.a | “北” |
| 1.b | “” |
| 1.c | “a” |
| 1.d | 17 |
| 1.e | “JosephusJosephusJosephus” |
| 1.f | null |
| 2.1 | “cat” |
| 2.2 | “DOG” |
| 2.a | “典Josephus” |
| 2.b | “” |
| 2.c | “a” |
| 2.d | 78 |
| 2.e | “JosephusJosephus” |
| 2.f | null |
| 3.1 | 1 |
| 3.2 | 33 |
| 3.3 | 2147483647 |
| 3.4 | 0 |
| 3.a | null |
| 3.b | -33 |
| 3.c | -1 |
| 3.d | -2147483648 |

**Representative Boundaries:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Equiv. Class** | **Representative** | **Lower Boundary** | **Upper Boundary** |
| 1.1 | “tenbergen” | “tenberge” | “tenbergenb” |
| 1.a | “北” | 典 | 书 |
| 1.b | “” | - | “a” |
| 1.c | “a” | “” | “aa” |
| 1.d | 17 | 16 | 18 |
| 1.e | “JosephusJosephusJosephus” | “JosephusJosephusJosephu” | “JosephusJosephusJosephuss” |
| 1.f | null | - | - |
| 2.1 | “cat” | “ca” | “catt” |
| 2.2 | “DOG” | “DO” | “DOGG” |
| 2.a | “典Josephus” | “典Josephu” | “典Josephuss” |
| 2.b | “” | - | “a” |
| 2.c | “a” | “” | “aa” |
| 2.d | 78 | 77 | 79 |
| 2.e | “JosephusJosephus” | “JosephusJosephu” | “JosephusJosephuss” |
| 2.f | null | - | - |
| 3.1 | 20 | 19 | 21 |
| 3.2 | 0 | -1 | 1 |
| 3.3 | 1 | 0 | 2 |
| 3.4 | 200 | 199 | 201 |
| 3.a | null | - | - |
| 3.b | -5 | -6 | -4 |
| 3.c | 6.5 | 6.4 | 6.6 |
| 3.d | -1 | -2 | 0 |

**Test Cases:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test ID** | **uname** | **word** | **points** | **Eq. Class** | **Expected Output** |
| t\_0 | “tenbergen” | “cat” | 19 | 1.1, 1.2, 1.3 |  |
| t\_1 | “北” | “cat” | 19 | 1.a | ERROR |
| t\_2 | “” | “cat” | 19 | 1.b | ERROR |
| t\_3 | “a” | “cat” | 19 | 1.c | ERROR |
| t\_4 | 17 | “cat” | 19 | 1.d | ERROR |
| t\_5 | “JosephusJosephusJosephus” | “cat” | 19 | 1.e | ERROR |
| t\_6 | null | “cat” | 19 | 1.f | ERROR |
| t\_7 | “tenbergen” | “DOG” | 19 | 2.2 |  |
| t\_8 | “tenbergen” | “典Josephus” | 19 | 2.a | ERROR |
| t\_9 | “tenbergen” | “” | 19 | 2.b | ERROR |
| t\_10 | “tenbergen” | “a” | 19 | 2.c | ERROR |
| t\_11 | “tenbergen” | 78 | 19 | 2.d | ERROR |
| t\_12 | “tenbergen” | “JosephusJosephus” | 19 | 2.e | ERROR |
| t\_13 | “tenbergen” | null | 19 | 2.f | ERROR |
| t\_14 | “tenbergen” | “cat” | 0 | 3.2 |  |
| t\_15 | “tenbergen” | “cat” | 1 | 3.3 |  |
| t\_16 | “tenbergen” | “cat” | 200 | 3.4 |  |
| t\_17 | “tenbergen” | “cat” | null | 3.a | ERROR |
| t\_18 | “tenbergen” | “cat” | -5 | 3.b | ERROR |
| t\_19 | “tenbergen” | “cat” | 6.5 | 3.c | ERROR |
| t\_20 | “tenbergen” | “cat” | -1 | 3.d | ERROR |
| t\_21 | “tenberge” | “cat” | 19 | 1.1 |  |
| t\_22 | “tenbergenn” | “cat” | 19 | 1.1 |  |
| t\_23 | 典 | “cat” | 19 | 1.a | ERROR |
| t\_24 | 书 | “cat” | 19 | 1.a | ERROR |
| t\_25 | “aa” | “cat” | 19 | 1.c | ERROR |
| t\_26 | 16 | “cat” | 19 | 1.d | ERROR |
| t\_27 | 18 | “cat” | 19 | 1.d | ERROR |
| t\_28 | “JosephusJosephusJosephu” | “cat” | 19 | 1.e | ERROR |
| t\_29 | “JosephusJosephusJosephuss” | “cat” | 19 | 1.e | ERROR |
| t\_30 | “tenbergen” | “ca” | 19 | 2.1 |  |
| t\_31 | “tenbergen” | “catt” | 19 | 2.1 |  |
| t\_32 | “tenbergen” | “DO” | 32 | 2.2, 3.2 |  |
| t\_33 | “tenbergen” | “DOGG” | 19 | 2.2 |  |
| t\_34 | “tenbergen” | “典Josephu” | 19 | 2.a | ERROR |
| t\_35 | “tenbergen” | “典Josephuss” | 19 | 2.a | ERROR |
| t\_36 | “tenbergen” | “aa” | 19 | 2.c | ERROR |
| t\_37 | “tenbergen” | 77 | 19 | 2.d | ERROR |
| t\_38 | “tenbergen” | 79 | 19 | 2.d | ERROR |
| t\_39 | “tenbergen” | “JosephusJosephu” | 19 | 2.e | ERROR |
| t\_40 | “tenbergen” | “JosephusJosephuss” | 19 | 2.e | ERROR |
| t\_41 | “tenbergen” | “cat” | 34 | 3.2 |  |
| t\_42 | “tenbergen” | “cat” | 2147483646 | 3.3 |  |
| t\_43 | “tenbergen” | “cat” | 2147483648 | 3.3 |  |
| t\_44 | “tenbergen” | “cat” | -34 | 3.b | ERROR |
| t\_45 | “tenbergen” | “cat” | -32 | 3.b | ERROR |
| t\_46 | “tenbergen” | “cat” | -2 | 3.c | ERROR |
| t\_47 | “tenbergen” | “cat” | -2147483649 | 3.d | ERROR |
| t\_48 | “tenbergen” | “cat” | -2147483647 | 3.d | ERROR |