**Test Reference:**

|  |  |
| --- | --- |
| /\*\* |  |
|  | \* Check if a username already is taken |
|  | \* @param uname The user's name |
|  | \* @return Boolean true if username taken, false if not, null if error |
|  | \*/ |

**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 |

**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 |

**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 | - | - |

**Test Cases:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test ID** | **uname** | **Eq. Class** | **Expected Output** |
| t\_0 | “tenbergen” | 1.1 |  |
| t\_1 | “北” | 1.a | ERROR |
| t\_2 | “” | 1.b | ERROR |
| t\_3 | “a” | 1.c | ERROR |
| t\_4 | 17 | 1.d | ERROR |
| t\_5 | “JosephusJosephusJosephus” | 1.e | ERROR |
| t\_6 | null | 1.f | ERROR |
| t\_7 | “tenberge” | 1.1 |  |
| t\_8 | “tenbergenn” | 1.1 |  |
| t\_9 | 典 | 1.a | ERROR |
| t\_10 | 书 | 1.a | ERROR |
| t\_11 | “aa” | 1.c | ERROR |
| t\_12 | 16 | 1.d | ERROR |
| t\_13 | 18 | 1.d | ERROR |
| t\_14 | “JosephusJosephusJosephu” | 1.e | ERROR |
| t\_15 | “JosephusJosephusJosephuss” | 1.e | ERROR |