**Test Reference:**

|  |  |
| --- | --- |
| /\*\* |  |
|  | \* Find a username given their mac address |
|  | \* @param mac The mac address to find a related user from |
|  | \* @return String the username related to the mac, null if nonexistent user or error |
|  | \*/ |

**Equivalent Classes:**

|  |  |  |
| --- | --- | --- |
|  | **Valid** | **Invalid** |
| **mac** | * **1.1 -** valid mac address string | * **1.a -** invalid mac address * **1.b -** empty string * **1.c -** single character * **1.d -** integer type * **1.e -** null |

**Class Representatives:**

|  |  |
| --- | --- |
| Equivalence Class | Representative |
| 1.1 | “00-14-22-01-23-45” |
| 1.a | “00-80-C8-E3-4C-B北” |
| 1.b | “” |
| 1.c | “b” |
| 1.d | 21 |
| 1.e | null |

**Representative Boundaries:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Equiv. Class** | **Representative** | **Lower Boundary** | **Upper Boundary** |
| 1.1 | “00-14-22-01-23-45” | “00-14-22-01-23-44” | “00-14-22-01-23-46” |
| 1.a | “00-80-C8-E3-4C-B北” | “00-80-C8-E3-4C-B典” | “00-80-C8-E3-4C-B书” |
| 1.b | “” | - | “b” |
| 1.c | “b” | “” | “bb” |
| 1.d | 21 | 20 | 22 |
| 1.e | null | - | - |

**Test Cases:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test ID** | **mac** | **Eq. Class** | **Expected Output** |
| t\_0 | “00-14-22-01-23-45” | 1.1 |  |
| t\_1 | “00-80-C8-E3-4C-B北” | 1.a | ERROR |
| t\_2 | “” | 1.b | ERROR |
| t\_3 | “b” | 1.c | ERROR |
| t\_4 | 21 | 1.d | ERROR |
| t\_5 | null | 1.e | ERROR |
| t\_6 | “00-14-22-01-23-44” | 1.1 |  |
| t\_7 | “00-14-22-01-23-46” | 1.2 |  |
| t\_8 | “00-80-C8-E3-4C-B典” | 1.a | ERROR |
| t\_9 | “00-80-C8-E3-4C-B书” | 1.a | ERROR |
| t\_10 | “bb” | 1.c | ERROR |
| t\_11 | 20 | 1.d | ERROR |
| t\_12 | 22 | 1.d | ERROR |