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Homework 3: Equivalence class and Boundary testing

To implement equivalence classes and boundary testing, we will need to analyze the requirements for the system and develop equivalence classes that will show the border values to test against. By going through the requirements for the system, we can identify the border conditions and come up with the following equivalence partitions shown in table 1.

Table 1: Equivalence Partitions.

| Less than 9 characters | At least 9 characters and not more than 24 characters | More than 24 characters |
|---|---|---|
| Contains no blank spaces | Contains no blank spaces | |
| Contains insufficient lower case | Contains sufficient lower case | |
| Contains insufficient upper case | Contains sufficient upper case | |
| Contains insufficient numbers | Contains sufficient numbers | |
| Contains insufficient special characters | Contains sufficient special characters | |
| Contains a identical five-character substring | Does not contain a indentical five-character subtring | |

| Test Case 1 | |
|---|---|
| Purpose | Testing a valid password |
| Input | DahatB2559_@ |
| Previous Passwords | test<br>this<br>crapeiie |
| Expected Output | ACCEPTED |

| Test Case 2 | |
|---|---|
| Purpose | Testing against a similar password |
| Input | SsaPmis628@@ |
| Previous Passwords | #558#&;DoGs<br>AVery990#ˆ<br>SimPass12!! |
| Expected Output | REJECTED: password too similar to a previous password |

| Test Case 3 | |
|---|---|
| Purpose | Testing against a password containing a space |
| Input | &ˆ!aaCH91 chat |
| Previous Passwords | #558#&;DoGs<br>AVery990#ˆ<br>ToT86635ss/< |
| Expected Output | REJECTED: password contains a space |

| Test Case 4 | |
|---|---|
| Purpose | Testing against a password with not enough lower case letters |
| Input | #$678123HOUSE |
| Previous Passwords | ToT86635ss/<br>AVery990#^<br>SimPass12!! |
| Expected Output | REJECTED: password does not have enough lower case letters |

| Test Case 5 | |
|---|---|
| Purpose | Testing against password with not enough upper case letters |
| Input | lowercasepasswords!;123 |
| Previous Passwords | #558#&;DoGs<br>AVery990#^<br>ToT86635ss/< |
| Expected Output | REJECTED: password does not have enough upper case letters |

| Test Case 6 | |
|---|---|
| Purpose | Testing against not enough numbers |
| Input | NumberBoycott_? |
| Previous Passwords | #558#&;DoGs<br>GUha891))<br>SimPass12!! |
| Expected Output | REJECTED: password does not have enough numbers |

| Test Case 7 | |
|---|---|
| Purpose | Testing against a short password |
| Input | Do12ah_= |
| Previous Passwords | #558#&;DoGs<br>GUha891))<br>SimPass12!! |
| Expected Output | REJECTED: password is too short |

| Test Case 8 | |
|---|---|
| Purpose | Testing against not enough numbers |
| Input | WAYtooLong__+=8835houseing40 |
| Previous Passwords | #558#&;DoGs<br>GUha891))<br>SimPass12!! |
| Expected Output | REJECTED: password is too long |