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**Assignment 1 Design Document**

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| PasswordCheckerUtility |
| comparePasswords(String password, String passwordConfirm)  If comparePasswordsWithReturn(password, passwordConfirm) is not true  Throw UnmatchedException  comparePasswordsWithReturn(java.lang.String password, java.lang.String passwordConfirm)  If password is equal to passwordConfirm  Return true  Else  Return false  getInvalidPasswords(java.util.ArrayList<java.lang.String> passwords)  Declare an ArrayList of Strings called invalidPasswords  Declare a String called s  For int x set to 0; x less than passwords size; x plus 1  Set s to String at index x of passwords  Try  IsValidPassword(s)  Catch LengthException  Add s + “ -> ” + exception message to invalidPasswords  Catch NoUpperAlphaException  Add s + “ -> ” + exception message to invalidPasswords  Catch NoLowerAlphaException  Add s + “ -> ” + exception message to invalidPasswords  Catch NoDigitException  Add s + “ -> ” + exception message to invalidPasswords  Catch NoSpecialCharacterException  Add s + “ -> ” + exception message to invalidPasswords  Catch InvalidSequenceException  Add s + “ -> ” + exception message to invalidPasswords  hasBetweenSixAndNineChars(java.lang.String password)  Declare int x and set to password length  If x is greater than or equal to 6 and x is less than or equal to 9  Return true  Else  Return false  hasDigit(java.lang.String password)  Declare int l and set to password length  For int x set to 0; x less than l; x plus one  Declare char n and set to char at index x of password  If n is greater than or equal to 48 and less than or equal to 57  Return true  Else  Throw NoDigitException  hasLowerAlpha(java.lang.String password)  Declare int l and set to password length  For int x set to 0; x less than l; x plus one  Declare char n and set to char at index x of password  If n is greater than or equal to 97 and less than or equal to 122  Return true  Else  Throw NoLowerAlphaException  hasSameCharInSequence(java.lang.String password)  Declare int named l and set to password length  Declare int named count and set to 0  Declare char named last  For int x set to one; x less than l; x plus one  Declare char named n and set to char at index x of password  Set last to char at index x minus one of password  If n equals last  Add one to count  If count equals 2  Throw InvalidSequenceException  Else  Set count to 0  hasSpecialChar(java.lang.String password)  Declare int l and set to password length  For int x set to 0; x less than l; x plus one  Declare char n and set to char at index x of password  If n is greater than or equal to 32 and less than or equal to 47  Return true  If n is greater than or equal to 58 and less than or equal to 64  Return true  If n is greater than or equal to 91 and less than or equal to 96  Return true  If n is greater than or equal to 123 and less than or equal to 126  Return true  Throw NoUpperAlphaException  hasUpperAlpha(java.lang.String password)  Declare int l and set to password length  For int x set to 0; x less than l; x plus one  Declare char n and set to char at index x of password  If n is greater than or equal to 65 and less than or equal to 90  Return true  Else  Throw NoUpperAlphaException  isValidLength(java.lang.String password)  Declare int x and set to password length  If x is greater than or equal to 6  Return true  Else  Throw LengthException  isValidPassword(java.lang.String password)  isValidLength(password)  hasUpperAlpha(password)  hasLowerAlpha(password)  hasSpecialChar(password)  hasDigit(password)  hasSameCharInSequence(password)  return true  isWeakPassword(java.lang.String password)  Return hasBetweenSixAndNineChars(password) |