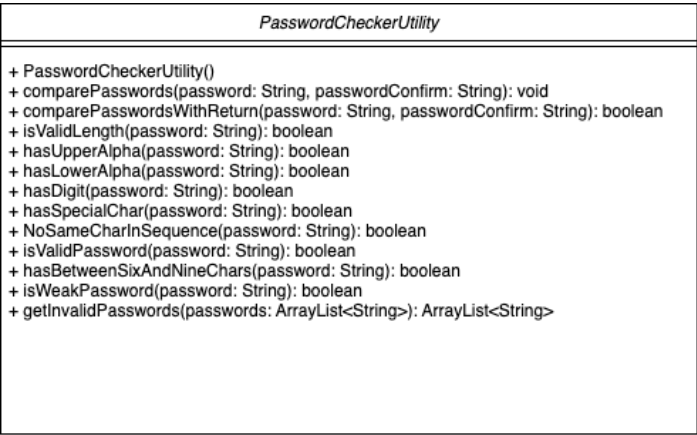


# CMSC204 - Assignment 1 Design

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## UML diagram



## Pseudocode

- import necessary libraries
  - ArrayList
  - Matcher
  - Pattern
- method `comparePasswords` throws `UnmatchedException`
  - if pwd doesn't equal pwd confirm
    - throw exception
- method `comparePasswordsWithReturn`
  - returns boolean for whether first param equals second param
- method `isValidLength` throws `LengthException`
  - if pwd is less than 6
    - throw exception
- method `hasUpperAlpha` throws `NoUpperAlphaException`
  - if uppercase character exists in pwd
    - return true
  - otherwise
    - throw exception
- method `hasLowerAlpha` throws `NoLowerAlphaException`
  - if lowercase character exists in pwd
    - return true
  - otherwise
    - throw exception
- method `hasDigit` throws `NoDigitException`
  - if digit exists in pwd
    - return true
  - otherwise
    - throw exception
- method `hasSpecialChar` throws `NoSpecialCharacterException`
  - if special character exists in pwd
    - return true
  - otherwise
    - throw exception
- method `NoSameCharInSequence` throws `InvalidSequenceException`

- if same characters are next to each other
  - throw exception
- otherwise
  - return true
- method `isValidPassword` throws `LengthException`, `NoUpperAlphaException`, `NoLowerAlphaException`, `NoDigitException`, `NoSpecialCharacterException`, `InvalidSequenceException`
  - if valid length, has uppercase letter, has lowercase letter, has digit, has special character, and has no same character sequences
    - return true
  - otherwise
    - one of the following exceptions will be thrown *depending on what condition(s) in the if statement throws an exception*
- method `hasBetweenSixAndNineChars`
  - if between 6 and 9 characters
    - return true
  - otherwise
    - return false
- method `isWeakPassword` throws `WeakPasswordException`
  - if between 6 to 9 characters
    - throws exception
  - otherwise
    - return false
- method `getInvalidPasswords`
  - for loop looping through ArrayList of passwords passed
    - remove valid passwords
  - return ArrayList of invalid passwords
    - format: `<pwd> <white space> <exception message>`