الجامعة الأهلية
AHLIA UNIVERSITY
BAHRAIN

Collage of Engineering: Computer Engineering Department
ECCE 537: Network Security

Assignment 3: Documentation

Password validation

Introduction

The goal of this project was to write a computer program that implements/simulates specific mutual trust (password validation). I decided to implement it in Python.

Usage

`py PasswordChecker.py passwordsFile` Execute the program with the given password file.

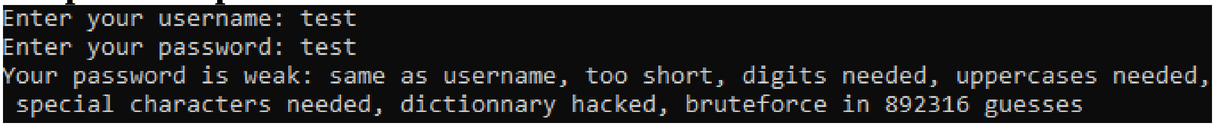
Implementation

In first, the user is asked to enter his/her username and password.
The program then checks the following points:

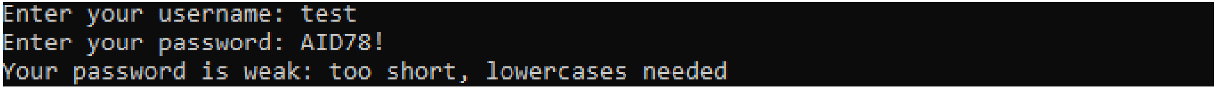
1) In the ***is_strong(password, error)*** function :
   a) If the password is the same as the password
   b) Length of the password: must be at least 10 characters
   c) If the password contains digits
   d) If the password contains uppercase characters
   e) If the password contains lowercase characters
   f) If the password contains special characters
2) In the ***bruteforce(password, length, error)*** function, the program attempt to find the password by generating for each character of the length of the string.
3) In ***the dictionnary_attack(password, error)*** function, the program check if the password entered by the user is not present in a dictionnary file, the filepath can be changed in the program.

If one of these conditions are met, the user's password is defined as weak, otherwise it is defined as strong.

Output examples



```
Enter your username: test
Enter your password: test
Your password is weak: same as username, too short, digits needed, uppercases needed,
 special characters needed, dictionnary hacked, bruteforce in 892316 guesses
```



```
Enter your username: test
Enter your password: AID78!
Your password is weak: too short, lowercases needed
```

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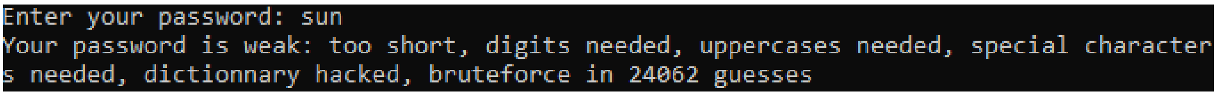
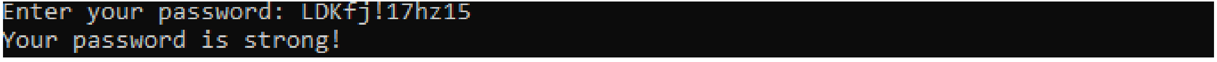


```
Enter your password: sun
Your password is weak: too short, digits needed, uppercases needed, special character
s needed, dictionnary hacked, bruteforce in 24062 guesses
```



```
Enter your password: LDKfj!17hz15
Your password is strong!
```