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Software Development 1

Password Strength Detector

The project that I have created is a Password strength detector. I achieved many of the goals I set out to achieve before I started my project like how I could make the password selection even stronger and safer by excluding certain words and phrases like “PASSWORD” and other super common passwords that are counted as safe but are very vulnerable. I was able to achieve this in a sense, my code is able to check the user's input and decide whether the password is strong or not, depending on the input the user entered and then tells the user what they did wrong to get a weak code.

So for my overall code I was able to code about 90% of what I actually wanted to code into the program. My motivation for this project was that I wanted to make a password detector because “ I think this is a very cool and interesting topic to work on, and I would really like to see how I could make the password selection even stronger and safer.” I think now that my initial motivation is still justified, however now I can say that my intentions for making this have changed a little bit. I now want to try to improve my code because I feel that the first step in securing a save account for anything is to have a strong password and sites that allow users to enter passwords that are so common and obvious are just unsafe for that account and the company behind it. Also I feel that this is very “fun” to code. I put fun in quotations because even though it was a lot of work and I got frustrated many times, I was still able to create a code that works well and it's nice to sit back and run what I worked on for a long time.

For what what the actual code does, I said in my milestone that “This seemed a little too easy for when I was thinking of an idea, so the other idea I had was to have the user enter in answers about their personal life, like dog name or family name, so that when the program runs it can look for those things the user entered in its password and then tell the user that it is not a strong password because it can be easy to replicate a password with information that is super easy for the user to remember. This could also work with numbers like birthdays or address numbers in the password. I would also like to exclude any of the very vulnerable passwords like, “123456” “password”, “qwerty”, and “baseball” (http://splashdata.com/blog/) which are some of the top 10 most used passwords of 2016.” But unfortunately through many trial and errors I wasn't able to get the code to just look for certain words that the user inputs so I had to remove that part from my code however I was able to make due with the most common popular passwords. The way my code works is that a prompt comes up instructing the user to enter a password with certain prerequisites when the user enters their password in it runs through my code and the code tells the user if it's strong, it's weak because there's not enough characters, it's weak because there's not enough enough digits, it's weak because there is not capital letters, or if it's weak because they enter a password that was “too common” meaning it has words that were on the list of the most common passwords. For the last part I made the code exclude passwords if they included passwords that were exactly the same as “Qwerty1234” and so on. If I had one thing to change ot my code it would be exactly that, I would like my code to exclusive exclude certain words that the user enters like “password” and “qwerty” even if it is mixed in with other words and digits, however I was never able to add that in, so I would definitely add those in if I

were to change my code. Unfortunately I had to just settle with excluding very specific passwords that are preset in the code.

Ultimately I feel like I achieved what I set out to create, a password strength detector with more of a security factor built in. Although I had to scrap one of the ideas that made this project a little more unique and more challenging to me I still accomplished many challenges that I faced while coding this program. I would like to work on this a little more and see where I can take it because I want to see more websites and companies going to greater lengths to protect their users and their accounts. I feel as there is no negative to being on the safe side when it comes to cyber security.

Use Case Diagram

Password Project1
+userInput +userPassword +isStrong;boolean +i +upperCase +digits