Name(s)	Project Number
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Project Title

Cracking the Code: Determining the Strength of Passwords

Abstract

Objectives/Goals
   The purpose of my science experiment is to find out what type of password is the strongest. The reason why I am doing this project is because these days you use passwords on a daily bases; from social media to bank accounts. However, we have so many passwords we might be inclined to make them all the same or simple. We forget how sensitive this information is and the risk we take if it falls into the wrong hands. I will use passwords with numbers, letters, and a combination of the two. To get these passwords, I will ask 30 people to make up a password, 10 people will be in each group. I will also use a password strength detector to find the strength of the passwords. I will then find the average strength of each password and compare them.
   The control group will be the passwords with both letters and numbers.
   After I am done with my project, I expect to find the strongest type of password to keep my accounts safe.

Methods/Materials
   Die, Computer, 30 participants to come up with one password each and website http://password-checker.online-domain-tools.com/ to test each password. I did not modify the website.

Results
   After completing my experiment, I concluded that Group 2 (passwords with numbers and letters) had the highest average strength of 51%, followed by Group 1 (passwords with only letters) having an average strength of 48%. Group 3 (passwords with only numbers) had the smallest average strength of 28%. These
   results tell me that the strongest passwords (according to my experiment) are the passwords with numbers and letters, followed by only letters, and passwords with only numbers is the weakest.

Conclusions/Discussion
   After my test I concluded that the passwords that have both letters and numbers are the strongest of the three passwords. Furthermore the passwords with only letters are stronger than the passwords with only numbers.

Summary Statement
   By testing the strength of various passwords using an online source, i was able to determine the strongest type of passwords.

Help Received
   None, the only outside help I used the the online website password checker to determined the password strength.