Brandon Kline

Prof. Rivas

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<u>Basic Strong Password Generator</u>

For the semester project, I plan to create a simple password generator that can easily create strong passwords for use on secure accounts. The program will generate a strong password containing at least 8 to 12 characters. At least 4 of those characters will be a mix between numbers or capital letters, and each password will contain at least one symbol character. I plan to completely randomize the process of password creation aside from length. In order to have a password created, the user must first input how long they would like their password to be, then press Enter to have a password generated, requiring only a minimal effort and only a small amount of input from the user. The actual code of the project will likely consist of a user input statement and respective "if-else" variants to determine how long the password will be. Then, the program will randomly test each character in the chosen password length to see if it should be a number, symbol, or upper or lowercase letter. Once it determines the type of character that will be used in that space, it then randomly picks from the 24 letters (excluding i and o), ten numbers, or various symbols to be inserted into that space, then proceeds to the next space within the designated password length. For example, for the first character, the program would pick between one and four to determine the type of character, then, if it were an uppercase number, pick one of the 24 uppercase characters, then move onto the next character and repeat until the password is generated. Then the program would print the completed password for the user. While this project may not be impactful on a massive scale, it will certainly be a tool that I plan

to use whenever I am in need of a fresh password for a new account, and it is a tool that I will likely introduce to my friends and family members should they end up needing new passwords as well.