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CMPT 220 Section 111 – Software Development 1

Semester: Fall 2016

December 13, 2016

Project Final Write-Up / Milestone: “Strong Password Generator”

The main idea of my project is to make strong passwords easily and efficiently. I have implemented most of the java code already in order to do so. Originally, I was focusing on how to randomize a password for the user by obtaining random elements of the ASCII table. After implementing the code, I began to realize it was not what I had originally intended to develop. I then came up with a solution to create a password by asking the user for some input. The questions asked are geared towards personal and easily memorable *things* about his or her life that others would not be able to know the answer to. Thus, making the password easy to remember but also difficult for others to find out.

The illusion of the idea is to make the password look as if it is very long and hard to remember. This way even if someone were to see you type it in, it would be very difficult for them to decipher because of how many characters are contained within the password. Anybody other than the user themselves would not be able to memorize the password. This is the main idea behind what makes the password generated using my application strong.

The reason why I think this application would be widely used is because of how efficient and easy it is for someone to come up with a strong password for whatever it is needed for. There have been plenty of time where I have either forgotten my password for a particular account that I have. I have also become lazy and began using the same password over and over for all my accounts, making me more susceptible to getting hacked and on multiple accounts. It is just a

pain to come up with a new password every time it is needed. This application will be used to prevent all of that head ache caused by weak passwords or passwords that are hard to remember.

Once the application is finished with asking the user a series of questions, it then randomizes the order of each of the inputs provided. Finally, it prints out the output in a randomized order that can be copy and pasted into whatever it is needed for.

What I plan to do going forward is to add on to the program I already have established in a few ways such as user friendliness, efficiency, and the design. What I mean by design is to make the output displayed in a neat and easily readable format to make the output simple to copy and paste into whatever it should be used for. I also am considering implementing the java code onto a website html document to add more of an artistic touch to the project as a whole. This will enable the application to run through more smoothly and could attract the user more to using the application.

Another aspect I want to add into the password generating application is to ask the user questions on something personal such as, “What is your grandmother’s maiden name?”, something that only the user would know. This input will then be saved and displayed with the password generated to provide the user with a secret question and response, which is a common part of being able to recover the password generated. This part of the application will be used whenever the user needs to change an old password to a new one. It will increase the security of your account by ensuring that whoever is trying to change the password will not be able to unless they are to user themselves.

Making the application as user friendly as possible is a major priority for my project. I would like to add hints that make the password easy to remember but also discrete so no hackers

can infiltrate the user's account will be added to the application as well. Providing the user with a selection of hints that all pertain to the password generated will make the password easily memorable as well.

I would also like to provide multiple options to the user in regards of passwords to choose from, security questions to user, hints to make the password easily remembered, and even usernames to go along with everything. The goal is to make creating or managing accounts that the user has easy and quick.

I am not completely sure about how I am going to develop the website itself where the application can be accessed. I have ideas such as making the application more attractive by implementing buttons on the website itself. This could make the program much more easy to use and understandable so that people who are not so great with technology can easily use the application.

Implementing error messages to pop up if the user inputs information incorrectly and then asking the user to try again is another important aspect of this application. This will make it so users do not get stuck trying to figure what they did wrong and will make the process more efficient and friendly.

There is still plenty of work to be done but the ideas are all there and the main objectives of the application have already been accomplished. By the end of the process, the application will even have a catchy name and logo to display the looks of the icon to launch to program. People won't have to stress about remembering which password is used for which account. The goal of technology is to make things easier for people and that is the basis of my whole idea for this application.

Final Write-Up (Thoughts after the Milestone)

New Name: Account Generator

This paper will basically go into what the application is, how it can be used, and also what it will be useful for. To give a brief overview of the project I have been working on, the main idea of the application is to generate a strong password as efficiently as possible. Not only will the application be able to generate passwords, but it will also generate all the basic and important information needed in order for a user to create a new account anywhere.

To give a further and more detailed introduction of the application, I will go into detail with a general explanation of the application's main features. The application is basically designed to generate a password that is easy to remember, but also very strong and resistant to hackers. How can this be done? Well, essentially the password is created based off of personal, and not easily known information that will be asked to the user. The user will input the information and the password will be generated in random order using the given information. The application then goes a step further and provides basic account information such as security questions, an answer to the security question, and even a username or email address to be used.

Going into even further detail on exactly what this application does, I will explain step by step, what is actually happening throughout the process of using the password generating application. First, after the user runs the program, they will immediately get prompted to answer four separate questions consecutively. These four questions in specific are, "What month we're you born in?", "What is your lucky numbers?", "What was your most significant year of your life?", and "What are your initials?". Once the user provides all of the information asked, the password is then displayed to the user in a random format that can be easily copy and pasted or

even memorized, saved, or written down from there. After this password is completely generated, the user is prompted to choose one of the questions provided in the array. The user chooses by picking a number between 0-4 that corresponds to the question they desire. After the question is picked, the user is then prompted to answer the question that they chose. The question chosen and the answer given is then displayed to the user to show if it is correct. Finally, the last couple of steps of this application are that the user is then asked to give a username or email address they would like to use for the chosen account they are creating. After this input is received and displayed back for neatness and correctness, the user is given the option to enter any key on the keyboard and all the details developed throughout using the application will be displayed in a neat and user friendly fashion.

As you can already see, there is not much that is physically required from this account information generating application. The only real physical requirements in order to use this application is to have a user to provide input once prompted for it. The Java code obviously needs a scanner imported in order to obtain user input and contain that input into variables which will then be later displayed in a unique and useful piece of information. The only other requirement is the need for someone to create a new password or account, which is not so uncommon in the modern day and age, especially as a computer science major.

There are not many applications out there today like this one, surprisingly enough. I do not doubt that if you google random password generators you will find something online. But, the main difference between my application and most others is how easy it is to use and how simple but also almost unbreakable the password generated in my application is. Not only is this application very simple for someone to use, even if they were new to technology, but it is quick, detailed, and will save people a lot of time and head ache trying to remember old passwords or

getting hacked from weak ones. Now there is a way to accomplish creating an account for whatever needed, could be Instagram, Facebook, snapchat, g-mail, whatever the case, in style.

Most of the user manual is basically been explained already, but to go into deeper detail on how to avoid errors throughout the process, I will explain some things to look out for while using the application. Most importantly, I will start by saying that each question asked is designed to be easy to interpret that way the user will provide the input correctly. However, for those of you who do not like to read and follow directions so much, avoid providing input incorrectly. To be more specific, if the question is “what are your lucky numbers..” enter them as number, like 17, and not letters or symbols. Some of the variables storing the input are strings so it does not matter if it is a number or what. Other questions will come back with an error message if the input is not what was being asked for. So, the main and really only thing to look out for while walking through this application is to input your answers in correct and proper format, that way the application will run through smooth and quick. Also, something that may not be easily understood but I find to be quite effective when generating my passwords is to make it as difficult to guess as possible. By making the information difficult to guess, I mean when you are asked what month you were born in and you type out the words of the month, type it as for example, “mArCh”, which is much less obvious. I like to space the capital letters out by one space starting with the second letter and that is easy for me to remember.

Why do I feel this application to generate account information significant? Because who has not struggled with creating a new account for whatever the purpose? Half the time I find myself checking out as a guest when I buy products online from a company because I do not want to put in the time or effort to fill out all the information and come up with a new password that is effective or what will be my security to retrieve the password if lost want to request to change an

old password. There had been countless times in my life already, as a 20 year old, where I have had to create new accounts. It has gotten to the point where I don't even remember half of the accounts I have ever created because there has been so many in the past. Why isn't there a better way to go about this process is the real question to ask. An application like this has been needed for a long time now and it will continue to be needed. This particular industry could turn out to be quite a success one day soon. There are always more improvements that can be made. This application can be easily edited and updated in no time. I personally believe that if this idea got out and people really listened, there would be some large-scale projects geared towards venturing forward in this development. That is basically everything behind why I chose this idea as my project.

All of the references used to come up with everything included within this project come from my time and thought into the idea of more efficiently creating accounts.