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1. **The project I want to work on is** a brute force password breaker that is able to choose from either a premade database or let the user create their own password format and have the computer generate

passwords in that format. After the codes are generated and placed within a text file, the program will then use the text file and continuously enter the passwords until one of them turns out to be

the correct password.

Initial conditions will include a true or false user input as whether or not the passwords will be user generated or computer generated.

If the computer-generated option is chosen, then there will be follow-up questions as to what format the passwords will be in, is there a known length to the password,

and whether or not there will be any special characters excluded from the password.

**2. I want to work on this project because** it is extremely useful for me as a Cyber Security major

to know how these brute-force machines work create my own password databases at a moment’s notice (hopefully).

**3. To successfully complete the project, I will need to improve my Java skills in these areas:**

* GUI - I want the machine to have an extensive and helpful that allows anyone to crack a password
* Reading and Writing to/from a .txt file: I want the program to generate new codes and write

them into a document if the user wants them to. The user will also have the option to read

from an already created .txt file (i.e. most used passwords) which isn't too complex however

I'm still fairly new to implementing .txt files in java.

**4. I will need to learn new Java skills in these areas:**

* Again, GUI. If the user does decide to use a pre-made password list, it would be nifty if they could view/ edit it within the GUI.
* Using computer key binds i.e. typing the generated password in a field and hitting enter. Also figuring out a way to exit the program while it has control of the keyboard.
* If there are any popup windows that appear after an incorrect or correct password/ code is typed, then I also need to figure out how to close or answer that pop-up.
* If possible, I would like the program to be launchable from the desktop without requiring NetBeans (if possible).

**5. I will have the following challenges to overcome in implementing my project using the MVC design pattern:**

* I will just need to be careful with how the user generated password format/ data is sent back to the model so it can generate the passwords there and retrieve them later.

**6. Explain whether and why you will use Swing or Fx to complete your project. How familiar are you with Swing and Fx? (Realize that if you use a GUI editor (e.g., the one in NetBeans for Swing or SceneBuilder for Fx) that you are own your own as far as help goes.)**

* I will try to use JavaFX due it apparently being easier to use, more available options in case I decide to add an online element to this program, and it's completely new to me. I'm already semi-familiar with Swing so I'm trying to learn something new.

**7. Why should I believe that you can complete the project you propose on time, with working code that demonstrates the features you will promise for each deliverable?**

* You can believe the project will be complete since this is a project/topic I'm interested in and excited about. The project may be a little challenging, however I am familiar with most of the concepts that make up the bulk of the program.