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Lab Report

Lab 1 – Option B(Password Cracking)

**Introduction**

In this Lab the main concept was to crack the UsersPassword by generating every possible combination starting from three zeros to seven zeros,increase by one each time then concatenate the all possible combination to the userspassword this way you can create a bigger one that will be uses to compare to users hash password

**Proposed Solution design and implementation:**

The way I started solving the problem was first breaking down the problem ;for example how to generate numbers from zero to nine, second how to create all possible combinations starting at the length three and increasing the length to seven. To do this I created a forloop that goes from range i which starts at zero and I goes all the way to ten. To increase the length you can call the method inside the forloop for i in range(0,10) method(start + str(i)) this will concatenate all possible combinations to a string this way its easier to combine the usersPassword with all the possible combinations. Second read the text file into columns this way its easier to access all the usersPassword and hashpassword at the same time; at this point my next step is to save the users passwords and hashpasswords into variables which I name UserPass and HashPass.,then I would use this two variables to compare and to concatenate the values. usersPassword + PossibleCombinations this will combine both of them into one then call the method hash256 this will created even bigger password.The third and final step is to check from all the possible combinations I did compare it to the usersHash this will give the final output true or false.

Experimental Results:

To test if my code works I try a smaller value length 3 and delete some of the users so it runs faster.

Conclusion:

In the process of making the code I learned a different to be more efficient with recursion and how with just calling the method and doing some operations it works the same if I had forloop,another aspect I learn was to check if my code work by making print statements and debugging small errors.