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**Secure Coding Lab 1- C Programming**

**Instructions:**

1. Write the programs using C language.
  2. It is recommended to use gcc compiler on a Linux platform. For those who do not have linux installed, you can code and compile online at : <https://www.onlinegdb.com/>
  3. Create a word document with the question, code and screenshot of the output.
  4. Add your name and register number on the top of the document.
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1. Write a C Program to authenticate a user using username and password. Have a list of 5 usernames and passwords in an array. If the entered username and password matches with the username / password combination in the array, then print as “Authentication Successful” else print “Authentication failed , try again”. The user is permitted to enter the wrong password only 3 times. If the user exceeds the limit, then print “Limit exceeded. Try later”.
  2. Write a C program to create a password strength meter. A password is said to be **strong** if it is at least 8 characters long and contains at least one lowercase character, one uppercase character, one special character ( !@#\$%^&\*()) and one digit. The program should obtain a password string from the user and compute the password strength (in percentage) based on the 5 criteria listed above for strong passwords.
  3. Write a C program to generate strong passwords of a length specified by the user.