Ally: A Novel Approach to Online Password Generation

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The aim of the project was to develop a computer application that would generate secure passwords on behalf of the user which the user does not have to store or remember. This application lets the user input answers to 5 specific security questions that will act as a key, to decrypt the source code that will generate and display the password; therefore by entering the exact same data to those specific questions results in the same password being generated every time. Current password generators provide random passwords of no significance to the user, but through the use of a user input key every password generated by the application is relevant to the user. The application is designed to reduce the number of times people forget and try to retrieve or reset their online passwords. The password is not stored in a database or any form of secondary storage, therefore eliminating the threat of the password and valuable information being compromised by hackers. The password is regenerated every time the exact same answers to the specific questions are entered, thus the password is never stored or known by any computing system besides that being used by the server. The program was written using Java and the generation of the passwords is done by complex linear calculations. The program was designed to work efficiently even with low -performance hardware; all devices that are java enabled can run the application. The application was successful in reducing the number of people who forgot their passwords by 89% in a sample of a 100 people. The results show that the application was a success.

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