SE 525: Software Security Architecture
Professor Corin Pitcher
Assignment 1 – Password Storage App
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Report for Assignment 1

Overall Functionality of Application

The functionality of the application starts with encryption. There is an input edit text box for both a password and the text which the user wishes to encrypt. When the encrypt button is pushed, the text from the input text box will be encrypted and stored to a file ("myEncrypted.txt"). If successful encryption and storage there will be a prompt on screen that the encryption was successful. If it failed then it will show an error/exception. When the user wishes to decrypt the saved text then he inputs the password and hits the decrypt button. It will then use the password to decrypt the saved encrypted text and put the decrypted text back in the edit text box.

Problems I encountered

I encountered a lot of smaller problems. I had a lot of issues where my syntax was a little off or the way I was doing something wasn't exactly correct. The biggest issue for me turned out to be a mistaken array access on the binary array I was saving to the file. Once I located it (took me a while) I was able to finish everything else up pretty quickly. I revisited some of my old Java books in order to troubleshoot a lot of the minor issues. For bigger ones, like locating problem with the array access location, I went to Google and searched out some good blogs.

Code is working (X – check mark)

The provided screenshots of the working app, from first inputing a password and encrypting to decryption follow this page.

- See screenshots on following pages

Self Assessment

**Code Functionality: Very Good**

App does everything for good, including storing the IV to the file before the cipher text, loads and decrypts using the saved IV plus uses Secure Random every time there is an encryption.

Code Quality: Satisfactory

The code is reasonable but not good in one or more of the criteria for good. - It could be better organized using more specific methods that reuse elements without the need for useless repetition.

Documentation Quality: Very Good

Documentation communicates the work that has been completed, has correct spelling and grammar, is polished and includes screenshots that allow reader to see how the application works.
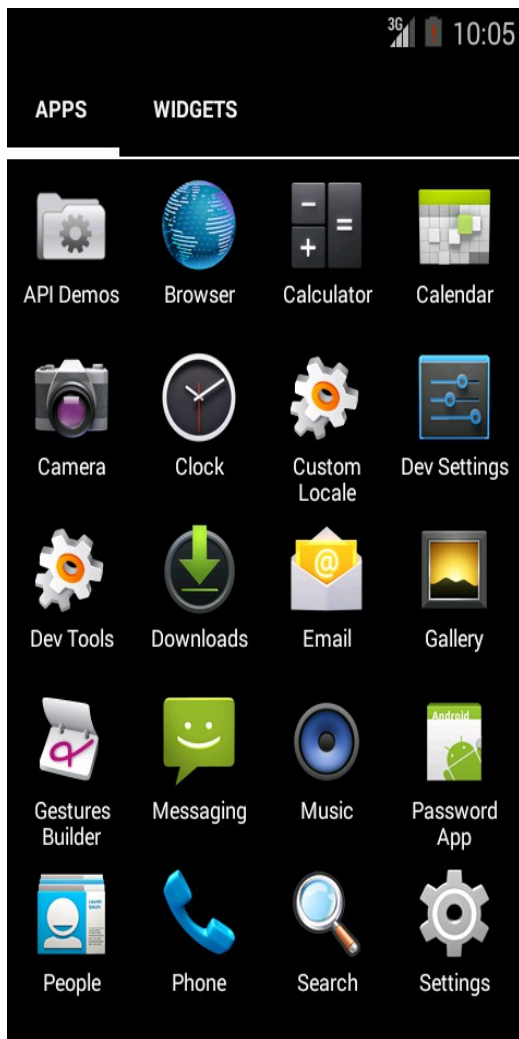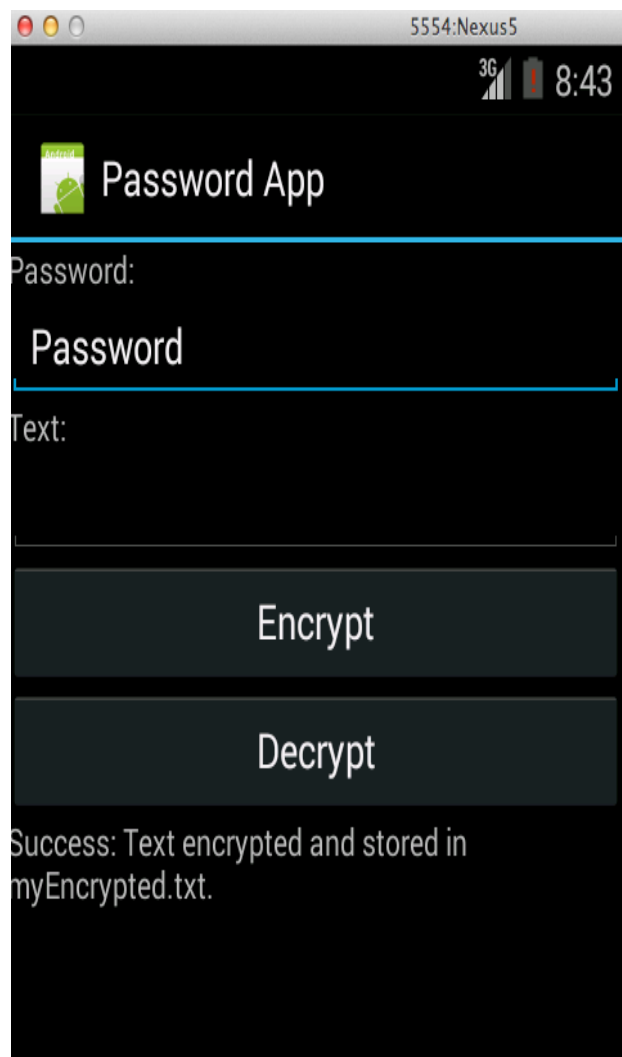
Screenshot of Password App in Main Menu
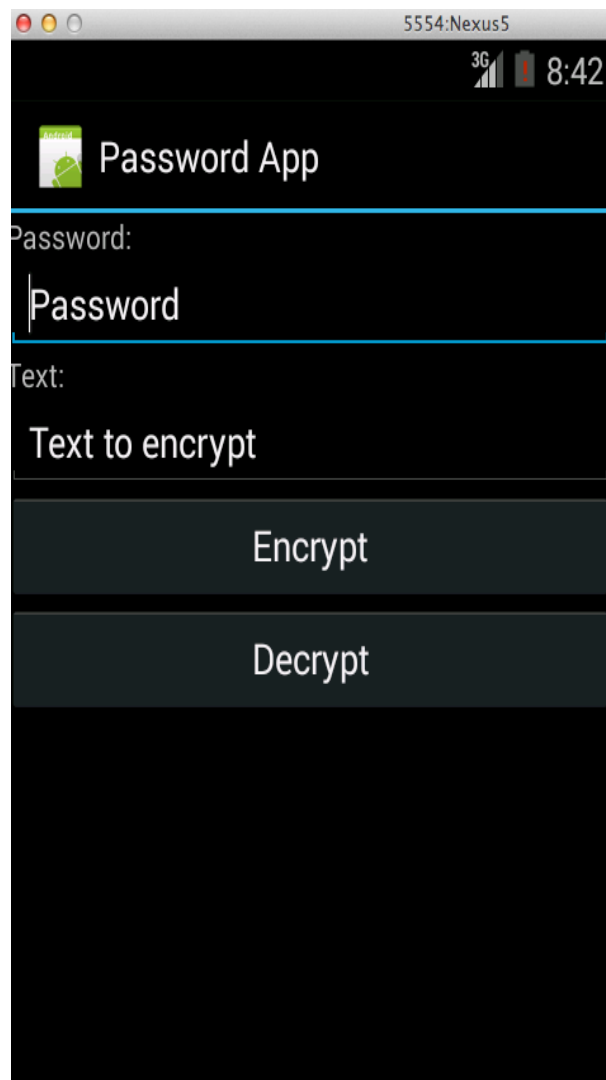
Inputting a password and text for encryption

Screen After successful encryption.

Putting in password for decryption.

After successful decryption.