

This is regarding assignment 1 submitted by Ritvik Khanna and student id is 1479093.

All the codes in problems 1-4 were taken from <http://inventwithpython.com/hacking/> in the download source and other files for this book. As stated in the assignment only necessary changes were made to the program to solve the problems. Except the minor changes made in the program I did not write the rest of the code and is a work of Al Sweigart and was downloaded from the above said website.

My solution is highly based on the source code as mentioned by professor Kondrak. I have made all the programs user friendly which asks the user to what to do except the problem 4.

### **Problem 1:**

#### ***For encryption -***

I just changed the length of the message according to the question to avoid shading in decryption and copied the elements in the order of the given key.

### **Problem 2:**

#### ***For decryption -***

I changed the order from the given key to the sequential order [1,2,3,4.....] and then used the same function given in the source code to decrypt. In the end I used the strip function to get rid of any additional spaces generated during the encryption.

***For the given message and key: "EXCELLENT WORK YOU HAVE CRACKED THE CODE"***

### **Problem 3:**

Nothing too confusing was introduced just some nested loops for the keys.

### **Problem 4:**

I have attached the necessary files and the program was changed to only decrypt the myster.txt file. The mystery.dec.txt file was decrypted in front of you and has been attached too.

Thank you so much for reading this.

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