Homework 8

CST 338

Background

If two people wish to communicate privately over an insecure medium, the sender can use a shared secret, called a **cipher**, to encrypt a message. The recipient can use the same cipher to decrypt it to reveal the original message.

One of the oldest (and least complicated) ciphers is known as the *Caesar* cipher (after Julius Caesar). To use the Caesar cipher, the two people must agree upon a **shift value**. Each letter in the original message will be shifted by this value. So, if they agree upon 7, the letter “a” becomes the letter “h”.

Here is an example of a quote encrypted with a Caesar cipher:

> Y jxyda secfkjuh isyudsu, ro qdt bqhwu, yi ijybb ijksa yd jxu Cetuhd qwu.

Task

Create an Android application that will allow the user to enter a message and a shift value. The application should then display the encrypted message in a new activity.

Create a main activity with the following three widgets (Views):

- An `EditText` field to allow the user to enter the text to be encrypted
- An `EditText` field to allow the user to enter the cipher value (an integer between 0 and 25)
    - Alternatively, you can use a `SeekBar` to get the integer value.
- A `Button` to allow the user to submit the information

When the user presses the submit button, the encrypted message should appear in a **new activity**. (To get full credit, you must use two activities.)

Feel free to design the two activity layouts any way that you see fit.

How to turn in?

Submit screenshots of each of the two screens on iLearn and your zipped source code. The first screen should contain the plaintext that is encrypted on the second screen.